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ORIGINAL ARTICLES.

THE ETIOLOGY OF MEMBRANOUS RHINITIS (RHINITIS FIBRINOSA).¹

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DURING the past year or two the condition of the nasal mucous membrane commonly known as membranous rhinitis has occasionally claimed the attention of the bacteriologist, the result of whose studies has been to show that a fair proportion of cases of this relatively rare disease are of a diphtheritic character, and that diphtheria-bacilli possessing their full virulence can often be isolated from them.

These observations, in connection with the fact that this affection is commonly looked upon as non-communicable, call for certain modifications in the care of these cases—modifications concerning less the treatment than the isolation of these patients; for, in so far as I am prepared to say, the treatment received by them is that which might be, and oftentimes is, profitably employed in typical pharyngeal and laryngeal diphtheria.

But, as has been said, these cases are usually not considered of a dangerous character, and are practically never isolated or prevented in any way from mingling with, and, indeed, often coming into intimate contact with healthy individuals.

They are, as a rule, seen in dispensary practice; they rarely or never present constitutional symptoms, and for these reasons they do not receive the attention that their gravity indicates. I have no positive evidence that diphtheria has ever been contracted from one of these cases, but from what we now know of them it is not improbable that this has more frequently happened than has hitherto been supposed. The comparative rarity of this disease necessarily limits the opportunity presented for its study, but the observations that have been made by reliable authorities point so directly to the diphtheritic nature of many of these cases that, when possible, it seems advisable to insist upon the bacteriological examination of all pseudo-membranous conditions of the nasal cavity that are not directly and positively traceable to other causes.

As results of such studies that have been made, Concetti,¹ in five cases of pseudo-membranous rhinitis obtained from two of them by culture-methods the virulent diphtheria-bacillus; in two others, a direct history of infection from one case to the other, with, in one of these latter cases, subsequent diphtheritic paralysis; while in the fifth case there was a secondary appearance of a membranous condition in the larynx. In all five cases the course was chronic, and, with the exception of the last case, was limited to the nose.

Stamm² examined, by bacteriological methods, four cases of typical membranous rhinitis, and found in all of them the virulent bacillus diphtheriae.

Baginsky³ describes two cases of membranous rhinitis, both of which ran a benign course, and from both of which the bacillus diphtheriae was obtained by culture-methods.

In his elaborate researches upon diphtheria and allied pseudo-membranous inflammations, Park⁴ gives the results of analysis of six cases of the disease. In all of these cases the Klebs-Loeffler bacillus was present—in five of them in relatively large numbers. As is usually observed, these cases ran a benign course, and no history of infection was obtained from any of them.

During the past nine months we have had an opportunity of examining three cases of membranous rhinitis, in all of which the disease was limited to the nasal cavity. For the first case we are indebted to Dr. B. Alexander Randall, of this city, who saw the child in the dispensary service at the Children's Hospital, and kindly permitted us to make an examination of a portion of the membrane removed by him. The clinical history of the case is not complete, for the child disappeared, and did not return to the dispensary. The bacteriological examination of this case, which was made by Dr. Griskey, revealed the presence of numerous colonies of bacillus diphtheriae which, when inoculated into guinea-pigs, caused the death of the animals with all the usual pathological lesions commonly produced by this organism in the bodies of guinea-pigs. There was no apparent diminution of virulence, and no deviation in the morphology of these organisms, or in their cultural peculiarities, from those common to diphtheria-bacilli obtained from undoubtedly cases of primary diphtheria.

The two remaining cases are especially interesting

¹ Read before the College of Physicians, Philadelphia, May 3, 1893.

from the fact that they occurred in two children in the same family, and doubtless represent an example of direct infection from one child to the other. For these cases I am indebted to Dr. Walter J. Freeman, of Philadelphia, who has kindly supplied me with the following histories.

The first of the two cases was a girl, M. W., aged seven years, who had had trouble with the nose for six or seven weeks prior to examination. It began as a cold; there was no headache, no fever, no sore-throat. Both nares were stopped up at the time of examination by thick membranous deposits, which were so adherent that in removing a piece, epistaxis of such a degree occurred that it became necessary to tampon the anterior portion of the nose for twenty-four hours. Ten days afterward the child appeared at the clinic; the membrane had entirely disappeared under treatment, and she was pronounced well.

Three days after this first child came to the dispensary the younger sister, aged two years, was brought by the mother, who stated that one week prior to that date the child had vomited, and on the evening of that day had a fever; was without appetite; was restless at night; the breathing was heavy and the nose "stopped up." Examination of this child in the dispensary revealed the presence of membrane in both nares. There was no sore-throat nor had there been any, and the temperature was 99°.

On April the 11th, twelve days after this child first appeared at the dispensary, I had an opportunity of making a bacteriological examination of the deposit in the nose. At this time both nares contained membrane, but not sufficient to plug them completely. The breathing of the child was principally through the mouth; there was no sore-throat, and otherwise she showed no evidence of any abnormal condition. The result of the bacteriological study of the membrane from the older sister revealed the presence of the Klebs-Loeffler bacillus in large numbers. Cultures from single colonies were not only identical in all morphological and cultural respects with those of Loeffler's bacillus as obtained from a genuine case of diphtheria, but also, like these, when inoculated subcutaneously into guinea-pigs, caused death in less than forty-eight hours, the autopsy revealing the pathological lesions characteristic of these inoculations.

From the younger sister, cultures of bacilli morphologically and biologically identical with Loeffler's bacillus were obtained, but when inoculated into guinea-pigs they were found to be of much lower degree of virulence than those obtained from the older sister. They did not cause the death of the animals, but produced only a local swelling and a very temporary indisposition, from which they recovered. In confirmation of Park's observation, the cultures obtained upon the day of examination from the

older sister, and which were virulent, as stated, at that time, were found after thirty days not only devoid of virulence, but indeed devoid of vitality, and it was impossible to get them to grow again, even under the most favorable conditions of cultivation. Except for the absence of pathogenic properties, the bacilli obtained from the latter case seen by me could not, by any of the means usually employed, be differentiated from the genuine virulent bacillus diphtheriae. Two guinea-pigs were inoculated with relatively larger amounts of cultures from two distinct single colonies on the original tubes from the nose, but, as stated, they have not succumbed to the operation.

The absence of virulence from the cultures of the latter case is not entirely surprising in the light of Park's observations: who found that in the six cases of rhinitis examined by him, all of which ran a benign course, the bacilli obtained in culture were all of a low degree of virulence, though it is interesting, in view of the probability of infection from one sister to the other in my cases, that in the one there should have been virulent and in the other non-virulent organisms, otherwise identical. Whether this can be due to the prolonged efforts of the tissues in resisting invasion, gradually depriving the organisms of their disease-producing powers, or to the repeated application of disinfecting solutions to the surfaces upon which they are located, it is impossible to say, but certainly we know that particular pathogenic organisms, if subjected for only a relatively short time to the action of disinfectants, when not completely destroyed, show the effects of the treatment by reduction in their pathogenic activity.⁵

In neither of the latter two cases seen by me have I been able to obtain a history of any marked constitutional disturbance that would lead one to suspect the presence of a grave condition.

It is very interesting, but a little confusing, to find the same organisms when located at different points giving rise to such essentially different clinical conditions as are seen when their seat of activity is the tissues of the fauces, as in diphtheria, and the tissues of the nasal cavity, as in membranous rhinitis. In the latter affection constitutional expression is the exception, and the course of the disease is usually more or less chronic, while the stages through which the typical diphtheria-patient passes are too well known to require rehearsal.

The differences in virulence that are often observed in the organisms obtained from cases of membranous rhinitis, and less frequently from diphtheritic patients, may serve, in part, at least, to explain the variations that are seen in the intensity, not only of the nasal form of the disease, but in true diphtheria as well. The bacilli present in genuine

diphtheria are, with but few exceptions, highly pathogenic for certain animals, and while this is often true of membranous rhinitis, it is, nevertheless, not unusual to find organisms that are constant in morphological and cultural identity with the bacillus diphtheriae, but which differ from this in the degree of their virulence, at times possessing this property, but in diminished intensity, and not infrequently being entirely devoid of it.

These observations undoubtedly offer another argument in support of the opinion advanced by Roux and Versin,⁶ myself,⁷ and others, that the virulence of the bacillus diphtheriae may be observed to fluctuate in the degree of its intensity; at one time possessing this property in a high degree, at another presenting a decided attenuation, and, not infrequently, a complete absence of pathogenic power; and that the virulent bacillus diphtheriae and so-called pseudo-diphtheritic bacillus are one and the same organism; the former being most commonly concerned in the production of a grave condition, associated with constant, or nearly constant, pathological and clinical expressions, while the tissue-changes and constitutional manifestations that present themselves as a result of the activities of the latter may vary with the degree of its disease-producing power. This hypothesis, of course, finds its most favorable application to those cases of rhinitis or other mild diphtheritic inflammations of which the clinical history would *a priori* almost exclude the probability of highly virulent organisms being concerned in their etiology.

With regard to the lack of constitutional disturbance in those cases of rhinitis running the usual benign course in which virulent diphtheria-bacilli are present, it must be borne in mind that not infrequently cases of genuine laryngeal or pharyngeal diphtheria are seen from which organisms possessing their full virulence can be isolated and from which all constitutional symptoms indicative of grave disorders are absent—a condition that, in the present state of our knowledge, we feel justified in referring to an exaggerated or unusual degree of resistance offered to the invading organisms by the tissues of the individual affected; a condition of the tissues formerly vaguely spoken of as "vital activity," but now generally recognized upon experimental evidence as a potent factor in repelling the inroads of disease-producing organisms.

That the organism that we have been accustomed to know as the pseudo-diphtheria bacillus, though incapable of destroying the life of guinea-pigs into which it has been inoculated, does, nevertheless, possess the power of causing in these animals limited localized tissue-changes, indistinguishable, save in degree, from those produced by the typical virulent bacillus, is borne out by microscopic examination

of the tissues at the seat of inoculation in animals into which these non-virulent forms have been introduced, but which have not succumbed to the operation; for example, of the two guinea-pigs inoculated subcutaneously with cultures from the last case mentioned by me, neither of which succumbed, and in both of which only local tumefaction occurred, one that had gone for ten days with no apparent constitutional disturbance was killed after this date. The autopsy revealed, at the seat of inoculation, a yellowish area marked by numerous hemorrhagic points and surrounded by a very limited zone of edema not over 0.5 c.m in extent. This yellowish area was firmly adherent to the overlying skin and extended into the substance of the abdominal wall. The peritoneum beneath it was slightly reddened; the inguinal gland on the side inoculated was very slightly enlarged and reddened. Upon opening the peritoneal and pleural cavities no fluid was present; the retro-peritoneal lymph-glands were neither enlarged nor reddened. The intestines were normal; the kidneys and liver were normal; the spleen was dark in color, otherwise normal; the adrenal bodies were small and pale, and upon section contained a brownish fluid; there was no excess of fluid in the pericardium, and the lungs were normal. The subcutaneous lymph-glands over the body, except those in the groin nearest the seat of inoculation, showed no change.

Culture-media (Loeffler's blood-serum and agar-agar) inoculated from the seat of inoculation, the blood of the heart, the liver and spleen, remained sterile.

Microscopic examination of sections of the seat of inoculation, hardened in alcohol and stained with fuchsin, revealed a condition in all essential respects identical with that described by Welch and Flexner⁸ at the seat of inoculation of animals dead after the subcutaneous introduction of virulent cultures of this organism. There was the same emigration and destruction of leukocytes, the nuclei of many of which were conspicuously disintegrated. The nuclei of the fixed cells were also seen to be undergoing destruction. Many of the muscle-fibers were hyaline, and at places were seen to be penetrated by leukocytes. When stained by Weigert's fibrin-stain a delicate network of fibrin could easily be made out. In short, the tissue-changes were in all respects, save for a diminution in degree, identical with those produced by the virulent bacillus diphtheriae.

For this reason we are inclined to the opinion that the term "pseudo-diphtheritic bacillus" as applied to an organism in all respects identical with the genuine diphtheritic bacillus, save for its inability to kill guinea-pigs when inoculated subcutaneously, is a misnomer, and that it would be

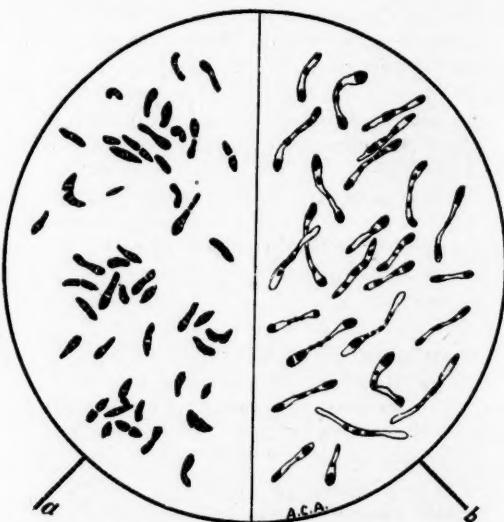
more nearly correct to designate this organism as the attenuated or non-virulent diphtheritic bacillus, reserving the term "pseudo-diphtheritic" for that organism or group of organisms (for there are probably several) that is enough like the diphtheria-bacillus to attract attention, but is distinguishable from it by certain morphological and cultural peculiarities aside from the question of virulence.

It is a well-known fact that many pathogenic organisms—conspicuous among these being the *diplococcus pneumoniae*, the *staphylococcus pyogenes aureus*, and the group of so-called hemorrhagic septicemia organisms—undergo marked variations in the degree of their pathogenic properties; and yet these organisms, when found either devoid of this peculiarity, or possessing it to a diminished degree, are not designated as "pseudo" forms of these organisms, but simply as the organisms themselves, the virulence of which, from various causes, has been modified.

Another interesting point to which Park calls attention is the peculiar morphological variations that he observed in the organisms obtained by him from the six rhinitis cases that came under his observation. He states that the bacilli from the agar-agar cultures were small and often pointed, while those from the blood-serum and broth cultures were long and slender, with swollen ends. We have repeatedly noticed this condition not only in the cultures from the rhinitis cases, but from cases of genuine pharyngeal diphtheria as well. We have recently been engaged in a series of experiments upon this point, and, though they are not as yet complete, the results thus far obtained are, we think, of sufficient importance to justify mention here.

The morphology of the organism while usually described as conspicuous for its irregularity, is, nevertheless, relatively constant under one and the same condition of cultivation. That is to say, the individuals comprising the growth on blood-serum (Loeffler's mixture) are very long, irregular, sometimes clubbed, sometimes pointed at ends, and are conspicuous for the irregular manner in which they take up the staining-fluid; while the growth of the same organism on glycerin agar-agar is far less voluminous, and the individuals composing it are, as a rule, short, oftentimes not over from one-sixth to one-fifth as long as the forms seen on blood-serum; they are pointed, curved, clubbed, spindle shaped, lancet-shaped, stain more uniformly and, without exception, possess transverse markings, when stained with Loeffler's blue, that give to them the appearance of being made up of very short segments. (See accompanying figure.) It is interesting to note the transition from the one form to the other when transferred from the one to the other culture-medium. We have repeatedly

isolated from cases of diphtheria the diphtheritic bacillus by Loeffler's blood-serum method and continued the pure cultivation of this organism upon blood-serum through five and six generations, in all of which practically only the long, irregular, imperfectly-staining rods could be seen, but as soon as a cultivation upon glycerin agar-agar was made from one of the generations, without a single exception, only the short segmented forms previously described would develop. Similarly, if the cultures were obtained from the throat upon glycerin agar-agar and continued through a number of generations on this medium, the transition from the short segmented to the long, irregular threads was seen within twenty-four hours after transferring them to the blood-serum mixture.



Bacillus diphtheriae. a. After twenty-four hours' growth on 6 per cent. glycerin agar-agar, at 37° C. b. After twenty-four hours' growth on 6 per cent. Loeffler's blood-serum, at 37° C. Magnified in both cases about 1500 diameters.

All of these long, irregular forms have hitherto been referred to collectively as involution or degenerate conditions of this organism, but I cannot reconcile the voluminous development within twenty-four hours, as seen on blood-serum, the most favorable medium for the growth of the diphtheria-bacillus, with the existence of a diseased condition of the individuals of which the growth is composed. We have made these observations upon cultures obtained from five different cases of genuine primary diphtheria, from two cases of membranous rhinitis, and one culture of the so-called pseudo-diphtheritic bacillus, and find them to hold for all. To which constituent of the culture-media the peculiar and sudden transitions are due we cannot definitely say

at present, but as the work is still in progress we hope to speak positively upon this point in the near future. These points of difference are not alone of technical interest, for it is important for the clinician who employs bacteriological methods in the study of his cases to realize that at least in the case of diphtheria the morphology of the organism causing it varies with the medium employed for its isolation and cultivation, and, unless he is familiar with the appearances presented by it under the varying conditions of environment, it is possible for error in diagnosis to arise, even though the manipulation of the case and the preparation of the cultures may have been practised with all of the precautions necessary to success.

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PARTIAL MYRINGECTOMY AND REMOVAL OF THE INCUS AND STAPES FOR THE RELIEF OF THE LESIONS OF CHRONIC CATARRHAL OTITIS MEDIA.

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THERE are numerous cases of chronic catarrhal otitis media—with its attendants, tinnitus, deafness, and aural vertigo—which continue to suffer and perplex their physicians, even after the nares, nasopharynx, and fauces are rendered normal, or nearly so. Therefore, after bringing the nose, nasopharynx, Eustachian tube, and throat into a normal condition, but still finding the aural symptoms little or no better, the aurist is confronted with the very important question as to what shall be done to improve the hearing, reduce the tinnitus, and abolish the vertiginous tendency.

Many methods of treating the ear at this point of its history have been suggested, chiefly for the relief of the one prominent symptom—deafness. These range from simple puncture to total excision of the tympanic membrane, and the removal of one or more of the ossicula.

Without stopping in this short article to discuss the merits and demerits of these various methods of

surgical treatment, I shall present briefly the notes of some cases in which I have performed a modified operation, the form of which is indicated in the title of this paper. In all of the following operations, the patients were etherized and the ear illuminated by an electric forehead-lamp.

CASE I.—Mrs. T. H., of Connecticut, fifty-nine years old, has been deaf in the left ear for twenty-five years, after typhoid fever. She can hear some words in her left ear with the otophone; there is constant tinnitus; she hears loud words close to the ear. The tuning-fork is heard well *per ossa*. There is a large bulbous cicatrix—comprising the entire posterior superior quadrant of the membrana. The incus-stapes joint is plainly visible through the thin cicatrix, when it is pushed inward by the pneumatic speculum. The malleus is shown by the pneumatic speculum to be adherent to the promontory. On October 31, 1892, the patient being etherized, the thin cicatrix described was excised, and the incus-stapes articulation, with the stapedius tendon, was exposed to view. The stapedius tendon was severed; the incus was separated from the stapes by the incus hook-knife, and easily removed. The blunt stapes-hook was passed, from below, under the head of the stapes between the crura. The stapes was found to be firmly ankylosed in the oval window. Gentle traction upon the stapes brought away the head and crura only. The rest of the membrana and the malleus were left *in situ*.

On November 1st there was no reaction, no improvement in hearing, and no change in the tinnitus. On November 2^d there was no reaction. The oval window was plainly visible; the foot-plate of the stapes was touched with a probe and found to be firmly attached to the oval window. The hearing this morning was better, being equal to six inches for isolated words, low tone, near the ear. The tinnitus was not lessened. On November 4th there was no reaction, though the patient had some coryza. Hearing was the same as at the last visit, viz., six inches for the voice. Tinnitus was less. On November 11th the hearing was eight inches for the voice. There was no reaction, and no signs of closure of the opening made by excision in the membrana. The patient returned to her home and I have not seen her since, though I have heard from her that the slight improvement in the hearing has been maintained, and that there has been no reaction in the ear operated upon.

CASE II.—Miss E., of Virginia, thirty years of age, was first examined in June, 1892. The patient has had nasal polypi removed; she has also had typhoid fever, and finally nervous prostration, with uterine disease, for which she has been treated. All of these maladies cover a period of the last six years. The hearing began to fail about two years previous to the time of first consulting me. There was then some slight hypertrophic nasal catarrh, for which the patient was ordered to use a spray of Dobell's solution two or three times a week.

In November, 1892, when I saw the patient again, I made the following notes: The right membrana tympani is retracted, opaque, bluish-pearl color; the incus-stapes articulation is not visible through

the membrana; there is constant tinnitus; the hearing for all sounds *per air* = 0; the tuning-fork is heard *per ossa*. The external auditory canal is very narrow.

On November 21st the patient was etherized, and the upper posterior quadrant of the membrana tympani was cut away and the incus revealed; the incus was detached from the stapes and removed from the tympanic cavity. The stapes was high-placed and not seen. Had I made the incision a little higher the stapes might have been seen, and an endeavor made to remove it.

On November 22d no reaction had taken place, and the patient volunteered the statement that the tinnitus was decidedly less, and that she could hear a little. On November 23d she heard a little better; no reaction was present, and the tinnitus was decreasing. On November 25th there was a little more tinnitus than on the 24th, but not as much as before the operation. On November 26th the patient could hear loud vocal sounds, per otophone, that were inaudible before. No tinnitus existed. On November 29th the same report was made as on the 26th instant. The patient now returned to her home. After her return home she exercised this ear, according to my directions, by having some one read to her through the otophone once or twice daily, for fifteen minutes at a time.

In December, 1892, she reported that she could hear better with the otophone, but not without it. In January, 1893, her father wrote me that his daughter could now hear reading near the right ear, unaided by the otophone, and with the voice slightly elevated. There has never been any reaction. I am unable to say whether the perforation in the membrana has been maintained. A letter in April informs me that still further improvement in hearing has occurred.

CASE III.—Mrs. S., of Connecticut, aged forty-seven years, now at the menopause, has had chronic sclerotic otitis media in both ears for twenty years, beginning first in the left ear. At the time of examination hearing in R. E. = 0; in the left ear, the voice close to the ear was heard. On December 13th the patient was etherized and excision of the upper posterior quadrant of the left membrana was performed. The membrane, being exceedingly thick and integumentary, bled profusely, and the operation was, in consequence, greatly delayed. The incus was seen with difficulty, but finally dislodged. The stapes was not seen at the time of the operation. The incus was accidentally dropped from the forceps into the tympanic cavity, but was finally hooked into view and removed. I now endeavored to convert the upper posterior quadrant of the membrana into a flap, and push it inward against the promontory to act as a preventive against a detached ossicle from falling into the tympanic cavity.

On December 17th the patient heard the voice several inches away from ear. She had some fugitive pains in the ear, but no discharge of any kind. On December 19th there was some pain reported in the ear on the night of the 17th, and some bloody muco-

purulent matter ran from it, probably due to the grappling for the incus when it fell to the bottom of tympanic cavity. However, at this date, there was no pain and the improved hearing was maintained.

CASE IV.—This was the right ear of the same patient as reported in Case III. It had been my intention to operate on both ears in this case at the same etherization, but the delay caused by the hemorrhage, dropping the incus, and finally the breaking of a "lug" in my storage battery, forced me to postpone the operation on the right ear until December 19, when the patient being again under ether, I excised the upper posterior quadrant of the membrana tympani and exposed the incus and the stapes. The chorda tympani prolapsed into the auditory canal after the removal of the incus, which was easily accomplished. I made traction with the blunt hook on the stapes and brought away the head and crura. On December 20th the patient could hear at a distance of several inches in this ear, in which she had not heard for years. There was no reaction. On December 23d she heard better in the right than in the left ear. On December 24th the patient went home pleased with the result of the operations.

CASE V.—Mr. J. H. P., twenty-three years old, has had chronic hypertrophic aural catarrh—ambilateral—for several years. The left ear was formerly better than the right ear. The latter has improved under treatment of the naso-pharynx, but the left ear has not improved. The hearing-distance in the left ear for the voice was one foot, and there was annoying tinnitus. The membrana tympani was opaque. The incus-stapes articulation was not visible through the membrana. On December 15th the patient was etherized and the posterior superior quadrant of the membrana was excised. The incus, stapes, stapedius pyramid, and the tendon inserted into the stapes were plainly visible. The tendon of the stapedius was first severed; then the incus was separated from the stapes and removed from the tympanic cavity. The blunt stapes-hook was passed beneath the head of the stapes and traction was made. The bonelet was found to be most firmly imbedded in the oval window. Traction upon the bonelet by the stapes-hook brought away the head and crura. The operation was bloodless.

On December 16th no reaction had taken place and there was much less tinnitus. The hearing-distance was not noted, as I failed to see the patient. On December 17th no reaction had occurred and there was marked diminution of the tinnitus; the hearing-distance for voice, low tones, was from four to six feet. On March 28, 1893, the perforation in the membrana had been maintained. A little tinnitus is perceived in this ear, if the patient takes cold in his head; otherwise he does not observe it. He volunteers the statement that the operation was worth the relief from the tinnitus, regardless of the improved hearing. The hearing-distance at the present time is from eight to ten feet for isolated words.

CASE VI.—B. B., a girl, twelve years old, had been known to have dulness of hearing in the left ear for two years. The right ear is entirely normal. Hearing in the left ear, 0; tinnitus, and vertigo at times, are annoying; the tuning-fork is heard *per ossa*.

On December 16, 1892, the patient was etherized and excision of the upper posterior quadrant of the left membrana was performed; no bleeding followed. The incus, stapes, and stapedius pyramid, with tendon, were distinctly seen. The stapedius-tendon was severed first; then the incus was detached from the stapes; the stapes was then removed entire, with the greatest ease, from the oval window. There was no escape of labyrinth-fluid. Finally the incus, which seemed unusually adherent in the attic, was removed.

The operation was bloodless. On the next day there was no reaction, no vertigo, and the patient felt well and lively; she heard isolated words in the left ear at a distance of from eight to ten inches; there was no tinnitus. On December 22d there was no reaction and no regeneration of the membrana; voice was heard in whisper at a distance of from six to eight inches; louder tones from two to three feet. There was no regeneration a month later. On April 1, 1893, regeneration of the membrana was found. The hearing was not improved, but there has been *entire relief from tinnitus and vertigo*, which symptoms had been ascribed to other causes before the ear was examined by me and finally operated upon.

CASE VII.—H. W., a cook, twenty-six years old, of English parentage, had been deaf for many years. In the right ear she hears the tuning-fork *per aēr* at a distance of one inch; in the left ear at two inches. She has marked symptoms of sclerotic otitis media. On January 13, 1893, the patient was etherized and the posterior superior quadrant of the right membrana was excised. The incus, stapes, and stapedius-tendon were exposed, the last cut, and the incus detached from the stapes and *pushed aside to be left in the tympanic cavity in this instance*. The stapes head and crura were then removed without the foot-plate, the latter being firmly fixed in the oval window; no bleeding ensued.

On January 14th, there had been no reaction, but considerable bloody serum had run from the ear, and the patient now left the hospital, in very cold weather. She heard isolated words at several inches' distance in the right ear. On January 16th, the patient reported that she had had a little pain in this ear; the bleeding from it still continued. This patient has very bad teeth, and at times, toothache. The atmospheric temperature was at 0° at this time. On January 17th, pain still continued in this ear and there was a discharge of bloody serum. The mucous membrane of the tympanum was congested and secretory; there was marked tinnitus. From January 18th to 25th, there was more or less constant and severe pain in this ear, with swelling of the meatus, tenderness, and a discharge of considerable pus. Loss of sleep from ear-pain was complained of. On January 31st, the ear was entirely well; the perforation in the membrana had healed and the patient heard no better than before the operation.

The incus should not have been left in the tympanum after its detachment, and the patient should not have left the hospital the day after the operation, in such very cold weather as was then prevailing.

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CASE VIII.—H. S., a girl, twelve years old, said that about two or three years ago hardness of hearing was noticed in the right ear. No cause was assigned for such a failure in function. Hearing was perfect in the other ear. Voice, close and loud, could be heard in the right ear. The patient had some sclerotic catarrh of the nares and naso-pharynx. The latter was treated for some weeks, with benefit, but without improving the hearing. On March 3, 1893, myringotomy was performed in the posterior superior quadrant, and the incus and stapes exposed. The incus was detached from the stapes and removed. The stapes was pulled upon by the blunt hook and the head and crura detached from the foot-plate, but they were drawn off the hook by the tendon of the stapedius and dropped out of sight behind the membrana. On March 4th, no reaction had ensued and no improvement in hearing. On March 28th, there had been no reaction and no irritation in the ear at any time. The membrana is entirely healed and rises and falls normally under Siegle's speculum. There has been no improvement in hearing.

CASE IX.—Mrs. W. G. P., forty-one years old, of New York, came under observation December 7, 1892. The patient stated that she began to grow deaf at the age of sixteen years; tinnitus existed in both ears of equal intensity and of a pulsating variety. Hearing in each ear, for the voice, was at about six inches, perhaps less acute in the left ear. The tuning-fork was not perceived *per aēr*. Bone-conduction was normal. A nasal polypus was removed from the right naris; otherwise there was no disease of nose or naso-pharynx. The membranæ tympanorū were slightly opaque.

On March 16, 1893, the patient was etherized and myringectomy at the posterior superior quadrant of the left membrana revealed simply the extreme lower curved end of the incus. The incus was detached by the blunt hook and removed from the drum-cavity. The stapes was not seen, and hence was left undisturbed. The round window was placed very high and its plane turned farther forward and outward than any I have ever observed. The operation was nearly a bloodless one. On March 17th, no reaction had followed and no improvement in any of the symptoms. On March 18th, there had been no reaction, and the hearing was a little better, the tinnitus being less than in the other ear. In fact, the patient felt so much relief in the left ear as to express a desire to have the operation performed on the other ear. On March 19th, there was still no reaction, and the patient went to church. On March 20th, it was decided to operate on the right ear, as the left ear felt so much better than the right ear, which had been considered the better ear.

CASE X.—On March 20, 1893, operation was performed on the right ear of the patient in the preceding case. Excision of the upper posterior quadrant was effected. The membrana was found thicker and more retracted than that of the left, and there was a little more bleeding than from the left. No cocaine was used, as I am convinced that it is an irritant to the mucous membrane of the drum. The incus was detached in the same manner

as was the left incus, and was removed from the tympanum.

On March 21st no reaction had followed. The patient felt very well, and could hear isolated words spoken eight feet off, and she also heard her companion singing some distance from her, which she had never heard before. The tinnitus, however, was not materially relieved. The patient also heard sounds in the house and street she had never heard before from her room. On March 23d the patient returned to her home, and on March 28th I heard from her that the improvement had continued.

CONCLUSIONS.—1. The operation of partial excision of the membrana tympani (myringectomy of the posterior superior quadrant) is practically unattended by reaction.

2. Reaction not attending this modification of excision of the membrana, regeneration of the membrane is less likely to occur than when total excision of the membrana is performed.

3. Removal of the malleus is not necessary for relief in cases of simple chronic catarrhal otitis media.

4. The removal of the incus alone, or of the incus and the head and crura of the stapes, is followed by results as good as when the incus and the entire stapes are removed.

5. Displacement of the incus and leaving it in the drum-cavity, where the stapes is removed in part or in whole, is likely to be followed by inflammation of the middle ear, as shown in Case VII.

6. Removal of the incus alone, the membrana, malleus, and stapes being left *in situ*, gives more space in the drum-cavity, increases its resonance, and permits freer access of sound waves to the stapes, thereby improving the hearing.

7. The relief of tinnitus and aural vertigo is very probably due to the liberation of the stapes from the impacting weight of the incus, forced inward and held so by the retractive power of the indrawn membrana tympani and malleus, as I suggested over four years ago.¹

NEURALGIA OF THE BASE OF THE FOURTH TOE, AND ITS TREATMENT.

BY N. F. GRAHAM, M.D.,
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THIS painful affection has been long known to the observing in the profession, but no systematic observations as to its nature or causes were made until about the year 1870, when Dr. Thomas G. Morton, of Philadelphia, began to examine into the subject. In 1876 he embodied such facts as he had gathered in a clinical lecture which was published in the *American Journal of the Medical Sciences*. Since

then the malady has been known as "Morton's painful affection of the foot."

It is a neuralgic affection at the base of the fourth metatarsal bone.

Dr. Morton gives the history of fifteen cases that came under his professional care between the years 1870 and 1876. In all of these, the pain was localized to the fourth metatarso-phalangeal articulation. In some of the cases the pain followed at once upon an injury, such as stepping on a rolling stone, and others were gradually developed from long-continued pressure by the shoe.

When caused by an injury, the pain is quite suddenly developed, and is severe. When due to pressure the pain is but slight at first, increasing in severity until at times it becomes excruciating, and is only relieved by removing the shoe and manipulating the foot—spreading the toes and stretching them. Sometimes temporary relief is obtained by lateral pressure, and again, by pressure on the top and bottom of the toe.

Five of Dr. Morton's published cases were operated upon by the removal of the metatarso-phalangeal joint of the fourth toe, resulting in a cure so far as the pain was concerned. It is not stated, however, what the condition of the foot was as to deformity, or whether bony union took place between the resected ends.

It is believed by those who have given the subject attention that the anatomy of the metatarso-phalangeal joints may and probably does account, at least to some extent, for the trouble. The proximal joints of the great, the second, and the third toes are usually in a line; the fourth toe falls backward, often as much as one-fourth of an inch, whilst the fifth is shortened from three-eighths to one-half of an inch. This natural conformation of the foot brings the first half of the proximal phalanx of the small (fifth) toe against the proximal joint of the fourth toe, and in this way I believe the digital nerve of the fourth toe is compressed and injured by the base of the phalanx of the fifth toe.

The greater mobility of the fourth and fifth toes renders them more liable to the effects of injuries, whether from blows, sprains, or compression by a tight or ill-fitting shoe. The external plantar nerve gives off superficial and deep muscular branches. The superficial branch separates into two digital nerves that supply the outer and inner sides of the small toe and the outer side of the fourth toe. The peculiar relation of the proximal joints of the fourth and fifth toes, together with the greater freedom of motion in this part of the foot, renders this locality more liable to suffer from injuries. So, when the foot is compressed by a tight shoe, the digital nerve supplying the outer side of the fourth toe is subjected to pressure from the hard, unyielding

¹ The Polyclinic, Philadelphia, August, 1888.

phalanx of the fifth toe, setting up an irritation in the nerve that gives rise to the pain. This may be moderate or intense, according to the degree of injury done to the nerve.

Females are more prone to suffer from this affection than are males, owing to the tendency of the former to wear tighter, narrower, and shorter shoes, thus compressing the foot and toes in every direction. As a result, the proximal phalanx of the fifth toe is kept constantly in contact with the digital nerve on the inner aspect of the fourth toe. The fact that the female foot is more pliable and delicate cannot be regarded as a factor in causation. The malady would just as often be met with in men did they wear as tight, high-heeled, and unsuitable foot-gear as women. Neuralgia of the fourth toe should not be confounded with metatarsalgia, which is a very different affection, and one that is always due to compression of the whole foot from side-to-side lateral pressure.

In the ordinary style of boots the arch of the foot is not properly supported, and as a result an undue strain is placed upon the metatarsal bones and the metatarso-phalangeal joints of the great, second, and third toes. Usually, in measuring for a shoe the shoemaker measures whilst the foot is in an elevated position and the arch of the foot drawn up. No allowance is made for the change that takes place when the individual is erect and the foot is spread and lengthened by the weight of the body on it. So, when the shoe is made it is constructed to fit the foot in the shape and position in which it was held during the measurement, and not for the position it assumes when the full weight of the body is brought to bear upon it.

At first the pain in metatarsalgia is not great, but as the day advances the cramping pain in all of the tarso-metatarsal joints becomes aggravated and very soon becomes unbearable. It can only be relieved by the removal of the boot, followed by manipulation of the toes and foot. The reason why the pain is greatest in these joints, is because of their greater width and the greater degree of spreading which takes place in this locality when the foot is made to support the weight of the body. Metatarsalgia is not strictly a localized affection of the nerves, but is due rather to general pressure. It is the experience that comes to every person who attempts to "break in" a very tight shoe. If the wearing of tight shoes be persisted in, this condition may become chronic and may assume many of the characteristics of rheumatism, and be, like rheumatism, aggravated by cold and dampness.

The treatment of acute metatarsalgia is the removal of the offending shoe and the wearing an old or loose one. If the affection become chronic, the wearing of wide-soled shoes of a sufficient and

comfortable length, together with a pad to support the arch, is all that is necessary. Frequent bathing with hot water or the application of soothing liniments may be necessary, in addition to the properly constructed shoe, providing the pain persists.

Pododynia or podalgia are names applied to certain painful affections of the foot that have no fixed location, although the pain is commonly situated in the heel or sole of the foot, and may be purely reflex from diseased conditions situated at parts remote from the foot. For example, a stricture of the urethra, cystitis, or disease of the prostate may give rise to a pain in the heel. Neuralgia located at the neck of the bladder may cause podalgia, and gout and rheumatism are fruitful causes of the affection. Renal calculus, gonorrhœa, and syphilis are accompanied by diseases of the foot, such as gonorrhœal rheumatism and syphilitic bursitis.

In the early stages of posterior-spinal sclerosis the heel is quite often the seat of persistent pain, which may continue indefinitely throughout the progress of the disease. For the relief of pododynia the treatment should be directed to the remote affection on which the pain may be found to depend.

Various measures, remedial and mechanical, have been resorted to for the relief and cure of Morton's disease. Among the most important of these is the discarding of short and tight shoes, and the wearing of broad-soled and loose ones, a soft pad being placed between the fourth and fifth toes, and the toes being fixed together at their free ends in order to separate the metatarsal ends. Many secure relief by wearing an elastic band around the foot over the metatarsal bones. Frequent bathing in warm water and the use of liniments are sometimes helpful, but the most successful plan in the majority of cases is the wearing of suitably constructed shoes.

Beyond any cavil the shoe is, in the very large majority of cases, the exciting cause of the affection, and but a very small percentage can be regarded as attributable to an injury. I am the more strongly convinced of this fact from inquiries among shoe-dealers. Those whose patrons come from the richer class of society are quite familiar with an affection of the foot, which, from their description, is no doubt a neuralgia of the fourth toe, and with which those who deal largely or altogether in the coarser and roomier kinds of foot-gear are not at all familiar.

Dr. Morton's operation for the radical cure of this affection consists in making an incision two inches in length along the outer edge of the affected toe, opening up the articulation, and resecting the ends of the metatarsal bone and phalanx.

In my own personal experience, covering a period of about eight years, I have met with and have notes of fourteen cases, nine of which were cured or

materially relieved by properly constructed shoes, *i. e.*, shoes with broad soles and of length sufficient not to cramp the toes. I have also given relief by separating the toes by pledgets of cotton and by the use of liniments, particularly the one composed of chloral-camphor and chloroform.

In one very aggravated case I amputated the toe, removing also a portion of the metatarsal bone. The result was a perfect cure so far as the pain was concerned, and the patient being a man, the deformity resulting from the loss was not regarded by him as material. The foot remains strong and well after a period of seven years, with no return of the pain.

The four remaining cases I will give in detail:

CASE I.—J. S., female, thirty-six years of age, had been in the habit for many years of wearing narrow and short shoes. She came under my observation early in 1885, suffering from constant pain at the base of the fourth toe that began about two years before. The base of the toe was somewhat swollen, and examination revealed a slight cord-like prominence along the course of the digital nerve of the fourth toe, and a similar enlargement of the nerve on the inner aspect of the fifth toe, which I thought to be inflammatory swellings in the nerve-sheaths. I made an incision, dividing integument and fascia over both the elongated prominences, a little above the middle line, between the top and bottom of each toe; I divided the web above this first incision, continued it upward about an inch, and resected the extremities of both nerves from near the points of the toes to somewhat over half an inch above the metatarso-phalangeal joints. The process of repair was complete in a week, with perfect relief from the pain, which had for months been very severe.

In this case the pain was not confined to the diseased nerves, but extended upward as high as the ankle. There has been no return of the pain, and the woman can now wear ordinary shoes with comfort.

CASE II.—Mrs. J. R., thirty-eight years of age, was a strong, healthy woman, of excellent habits and having no constitutional defect of any kind. For many years her occupation required constant standing and moving about. Being somewhat stout, the constant pressure on the feet was increased by her weight. She came under my care in June, 1885. She gave a history of pain at the base of the fourth toe, which was at first slight and temporarily relieved by moving the toes about in the shoe. In the course of a few months the pain came on in severe paroxysms that continued until she was compelled to remove the shoe and manipulate the foot in order to secure relief. She had used hot and cold water and liniments, and had also increased the size, length, and breadth of her shoes, all without avail, until finally she had concluded to consult me with a view of having the toe removed. Ex-

amination revealed a tender line along the course of the digital nerve on the outer aspect of the fourth toe.

Bringing to mind the success attending the removal of the digital nerves in the previous case, I suggested the same operation to her, to which she readily consented. I operated by making an incision on the outer side of the toe, along the tender line, extending from the point of the toe to the web, continuing it backward between the metatarsal bones about an inch. The nerve was easily found, as it was enlarged, and I removed it from near its extremity to a distance of five-eighths of an inch above the head of the metatarsal bone. Union took place by first intention and the patient has since been wholly free from pain, the foot being as useful as it ever was.

CASE III.—Mrs. L. J., forty years of age, came under my care in the autumn of 1891, suffering from constant pain which had its origin at the base of the fourth toe. During the severe paroxysms to which she had recently become subject, the pain extended as high as the trochanters, simulating, at times, sciatica, except that the pain always began in the foot and extended upward. There were times when she was unable to work or move about. Before coming under my care she had been advised to wear broad and roomy shoes, to bathe the foot in hot water, and had used, as she expressed it, "all sorts of liniments," and all without relief.

Examination revealed a distinct cord-like prominence along the course of the digital nerve of the fourth toe, which I removed in the manner described in the case immediately preceding. The operation was followed by complete relief, and with the pain in the foot the pain in the leg and thigh also disappeared.

CASE IV.—Mrs. L. M., thirty-two years of age, came under my observation in April, 1892, suffering with intense pain at the base of the fourth toe. The toe was swollen and red, as was also the fifth toe. She could not endure the slightest pressure of a shoe, and was wearing large, broad-soled slippers. Any attempt at wearing a tight-fitting shoe caused so much pain that she could neither walk nor stand after a very short period. I applied a lead-and-opium wash with a view to controlling the inflammation and relieving the pain. After a few days of this treatment, with complete rest, the inflammation subsided, but an effort at wearing a shoe resulted in a recurrence of the pain, which extended along the foot and leg, terminating at the knee. An examination at this time revealed the presence of a painful line extending along the outer aspect of the head of the metatarsal bone and the proximal end of the first phalanx. The nerve was removed by an operation similar to that practised in the previous cases, resulting in decided relief at once. The results, however, were not so perfect as in my other cases, as when I last saw the woman, some four months since, she complained of a recurrence of the pain in a modified degree whenever she wore a tight shoe or walked for any length of time. She is not a prudent woman and did not take as good care of the foot, after the operation, as I wished, in addition to

which it may be said that she is a peevish and complaining woman and one whose habits are not particularly good, which may account for the occasional paroxysms of pain of which she complains. I think, too, it would have been better had I resected the nerve on the inner aspect of the small toe at the same time that I removed that of the fourth toe.

In all of these cases the resection of the nerve has proved so satisfactory that I shall continue to practise this mode of treatment in preference to any other. It has the advantages of being simple and easily performed. It leaves no deformity and seems to me to be a rational mode of procedure.

If, as seems to be established from the cases cited, the pain is due to the nerve, then I think this plan for its cure is reasonable and worthy of trial in this class of cases, which are by no means rare.

The removal of the toe and part of its metatarsal bone, or a resection by Morton's method, leaves some degree of deformity, which is an objection. The resection of large tracts of nerves at points remote from the seat of pain is not at all necessary, and, so far as tried, is not satisfactory. None of these objections can be urged against the removal of the diseased or painful portion of the nerve.

CLINICAL MEMORANDA.

A CASE OF APPENDICITIS OCCURRING ON THE SEVENTH DAY FOLLOWING LABOR; RUP- TURE INTO THE BOWEL; RECOVERY.

BY REUBEN PETERSON, M.D.,

GYNECOLOGIST TO ST. MARK'S HOSPITAL, GRAND RAPIDS, MICH.

ON November 29, 1892, I attended Mrs. S. in her fourth confinement. The labor was short and perfectly normal, and at 9 P.M. she was safely delivered of a nine-pound infant. The strictest antiseptic precautions were employed during and after the labor. The bowels were moved by an enema on the third day, and on the evening of the fifth day a mild laxative was administered, which was followed by a free evacuation the next morning. The temperature for the first week after the confinement never rose above 100°, and the patient even remarked that she had never done as well in her previous confinements.

On Tuesday, December 6th, I visited the patient at 7 P.M. for the purpose of giving directions about placing the infant upon an artificial food, the maternal milk-supply having proved inadequate. The mother at this time was feeling perfectly well, and was told that she might sit up in two or three days. My surprise, and, I may say, my chagrin, was great when I was hastily summoned two hours later to find the patient just recovering from a severe chill, with a temperature of 103° and a pulse of 120. Naturally my first thought was of sepsis in some form, but a most careful examination failed to reveal anything of this nature. The abdomen was perfectly flaccid, and thorough palpation showed no tenderness, either in the region of the uterus or elsewhere. The lochia were perfectly sweet and normal in every par-

ticular. Vaginal examination was also negative, and failed to show evidence of any pus-tube or parametric inflammation. So sure was I that some other than a septic trouble was the cause of the chill, that I questioned the patient closely in regard to her previous history, and felt relieved when told that she had had "malaria" some years before, although she had never had any chills accompanying it.

As she had formerly resided in a malarial district, and as the temperature the next morning was normal, although the pulse was 90, I judged that it might be a case of malaria, and, as not infrequently occurs in women who have been subject to this disease, that it had manifested itself during the puerperium as a chill. This diagnosis I was forced to make from an absence of physical signs indicative of anything else, but I watched closely for any symptoms that would warrant a change of mind as to the cause of the chill. While I was waiting I gave quinine until its physiologic effects were manifest.

On Thursday, December 8th, two days after the chill, the temperature, which had been normal during the day following the seizure, rose to 101°, although there were no chilly sensations. There was no abdominal tenderness, and the lochia remained normal. I ordered two tablespoonfuls of Epsom salts, with the idea that if a septic trouble existed it might be aborted by a thorough depletion of the peritoneum by means of copious watery dejections. During the afternoon and evening of December 8th the bowels moved frequently, in all as many as ten times. The next morning the patient began to be troubled with flatus, and at noon I found the abdomen moderately distended, and for the first time was enabled to locate some tenderness over the right side. The abdomen was not so distended as to prevent me from readily mapping out the uterus. The gas seemed to be collected principally in the ascending colon, which could be plainly outlined beneath the abdominal walls. The tenderness was not especially marked in the region of the appendix, and was at no time severe, but simply sufficient to enable one to detect it upon deep pressure. A moderate degree of dulness could be obtained over the whole right side of the abdomen by making use of light percussion and disregarding the tympanitic note. The patient complained of a dull pain in the right hypochondriac region, and noticed that she could not turn from one side to the other with as much freedom as formerly, and that when she lay upon the left side there was a sense of dragging in the opposite side.

On Saturday, December 10th, there was more pain on the right side, but it was still located high up in the region of the liver. It was not the acute, sharp pain indicative of peritoneal inflammation, but more of a dull ache or uncomfortable feeling, and was increased by movement. Although it seemed impossible that the trouble was in any way connected with the uterus, I again examined the pelvic organs thoroughly and found them perfectly normal. On Saturday evening, December 10th, the diagnosis was quite clear, for the tenderness began to be localized in the right iliac fossa, and a sense of resistance, but no distinct tumor, could be made out. Up to this time there had been no tenderness over McBurney's point, but now this sign began to show itself, though the tenderness was not marked.

During the next three days the symptoms became more severe. The temperature ranged from 100° in the morning to 102.5° at night, the pulse remaining at about 100 most of the time. The tongue became coated, the appetite poor, but the patient's condition was at no time alarming. The tenderness in the right iliac fossa was most pronounced about one week after the initial chill, when it and the sense of weight in the right side became less pronounced after a free evacuation of the bowels following a dose of castor oil. A well-defined, deep-seated tumor could be made out at this time in the region of the appendix, sausage-shaped, and extending down to the brim of the pelvis. It was non-adherent to the abdominal walls, and no fluctuation could be detected. The point of maximum tenderness was at the extreme end of the mass, but the sensitiveness was never very great, and deep pressure was necessary in order to make the patient complain of pain. There was but little abdominal distention, and what existed disappeared after each evacuation.

The treatment consisted in the administration of ounce-doses of castor oil once or twice a day, and the frequent employment of turpentine enemas, so that from two to four free daily evacuations were secured. The diet was restricted to peptonized milk and broths. Turpentine stapes were applied to the abdomen at the time when the pain was located over the liver, but these were discontinued upon the cessation of the pain, and local treatment was limited to daily applications of tincture of iodine over the right iliac region. On December 14th, eight days after the initial chill, the tenderness began to subside, and the patient could move from side to side with much more ease. The tumor, however, could still be plainly outlined, but showed no signs of fluctuation. In spite of these encouraging symptoms, the temperature and pulse remained high, and the patient felt most of the time as if bordering upon a chill.

On December 16th the conditions remained practically unchanged, and Dr. Eugene Boise was called in consultation, who, after a thorough examination of the patient, confirmed my diagnosis and coincided with me in the opinion that it would be better to await developments than to run the risks attendant upon an endeavor to drain an abscess-cavity in the region of the appendix, when no adhesions to the abdominal wall existed. The dangers and possibilities of a fatal outcome on the expectant plan of treatment were fully considered, but we decided, in view of the absence of alarming symptoms, to wait at least twenty-four hours, and in the meantime to make preparations to operate at any moment in case the necessity arose.

The following morning the patient's temperature was normal and her pulse 76, and she passed quite a quantity of pus from the bowels. From this time on she made a rapid recovery. The temperature remained normal, the tongue became clear, the tumor gradually disappeared, and an examination made December 27th showed only a slight thickening.

I have reported the foregoing case in detail for two reasons: First, because it is uncommon for the puerperal state to be complicated by an attack of appendicitis; and second, because it will place upon record a case of appendicitis with abscess, in which recovery took place without operation.

While the diagnosis of appendicitis can usually be quite readily made, it was in this case by no means easy, from the fact of the absence of local signs and of the initial chill occurring seven days after labor. While the rigid requirements of modern antiseptic midwifery are fast reducing the mortality among puerperal women to a minimum, and while the accoucheur can, by a strict observance of these rules, feel almost certain that no germs have been carried from without into the parturient tract during or subsequently to labor, he is by no means as certain that sepsis may not originate from the absorption of the germs lodged in a pus tube which has long existed, but which has not been diagnosticated.

That this is not a fanciful cause of puerperal fever is attested by the ever-accumulating list of reported cases. Tait¹ thinks it of enough importance to give in detail six cases reported by Dr. McDonald, in which puerperal fever originated from diseased appendages. Smith² calls attention to pyosalpinx as a not infrequent cause of puerperal fever. And the number of single cases reported in the journals is considerable.

Thus, while the attendant may be perfectly sure of his antisepsis, he is still unable, in the event of fever during the puerperium, to exclude sepsis arising from internal causes. And it was this uncertainty that gave rise to so much anxiety upon the occurrence of the chill in the case just reported, and which led to repeated examinations of the appendages before the localization of the tenderness and the appearance of the tumor in the right iliac fossa made the diagnosis of appendicitis clear. The different factors considered at the time were:

1. Septic infection, originating in the vagina or endometrium. This was excluded by absence of foul lochia and of pathologic conditions, as revealed by careful digital and ocular examinations.

2. Sepsis, arising from some preexisting affection of the appendages. This was excluded by the absence of all signs of such an origin, as revealed by bimanual examination.

3. Latent malaria, manifesting itself during the puerperium in the form of a chill. This was excluded only after the localization of the symptoms in the right iliac fossa.

4. Some obscure renal trouble of the right side. This was excluded by careful palpation of the kidney and examination of the urine.

5. Appendicitis—easily diagnosticated upon the appearance of the local signs.

It may be claimed that recovery from an attack of appendicitis by the rupture of the abscess into the bowel is of too common occurrence to merit a detailed description; but for a number of reasons it would seem as if these cases should be recorded. The accumulation of such cases and a careful consideration of the existing conditions may lead to a more conservative treatment of the disease than is prevalent in some quarters. In demonstrating the fact that for the lack of surgical interference in cases of appendicitis many valuable lives have been sacrificed, the surgical world may possibly be going to the other extreme, and by a too hasty resort to the knife may be running the risk of not

¹ *Abdominal Surgery*, vol. i, p. 402.

² *N. Y. Journ. Gyn. and Obst.*, Nov., 1892, vol. ii.

decreasing the mortality from this disease as much as would be possible under a more conservative course.

The reasons against an operation and favorable to the expectant plan of treatment were:

1. The physical signs indicated but little involvement of the peritoneum by the inflammatory process, and led us to suppose that pus, if present, was extra-peritoneal, and hence that less danger of intra-peritoneal rupture existed.

2. For three days previously to the rupture into the bowel the local signs were decreasing and not increasing.

3. The tumor was unattached to the abdominal wall, and the dangers were considerable of opening the general peritoneal cavity in an attempt to get at the pus, and thus starting up a general peritonitis.

4. While the general condition of the patient was not improving, it was growing no worse, and as the local tenderness was diminishing, it seemed highly probable that either the abscess would become attached to the abdominal wall, where it could be readily opened, or else be discharged through the bowel.

On the other hand the indications calling for an operation were:

1. The probability of the existence of pus, as indicated by rise of the temperature, the frequency of the pulse, and the presence of chilly sensations.

2. The advisability of giving exit to the pus through an abdominal incision, for fear the abscess otherwise might rupture into the peritoneal cavity and set up a general peritonitis.

The cases one sees most commonly reported are those in which the cure has resulted from surgical interference, and the scores of cases recovering without resort to the knife are likely to be lost sight of because they are not considered worth recording.

Fitz, to whom so much credit is due for his researches upon appendicitis, has recently again called attention to the fact "that nearly one-half of the cases of appendicitis get well without surgical treatment."¹ And this statement was called forth by a paper in which the author claimed that *every* case of appendicitis should be operated upon as soon as the diagnosis was clear. It is against this attempt to establish a universal rule of procedure that we must guard. Every case must be considered separately, and, while fully alive to the dangers of temporizing when the symptoms indicate that the disease is progressing rapidly, we should ever be on the watch for symptoms that will allow us to dispense with the knife. "The tendency of the best surgical thought in regard to appendicitis is toward an enlightened radicalism."²

A CASE OF NORWAY ITCH.

BY ROBERT HESSLER, A.B., M.D.,
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ABOUT the middle of last October the superintendent of the City Hospital brought me a small handful of "scales" from a patient admitted on that day and afflicted with some obscure skin-disease. I was requested to examine these scales microscopically and, if possible, determine the nature of the disease.

A brief history of the case obtained at that time was

¹ Boston Medical and Surgical Journal, August 4, 1892.

² Editorial, MEDICAL NEWS, December 10, 1892.

about as follows: The patient, a middle-aged man, a former base-ball player, had been a paralytic for several years; the right side of his body was not under control. A skin-eruption appeared three or four years ago, and in spite of medical treatment by various physicians steadily grew worse. Various diagnoses had been made. Syphilis was the most common diagnosis, although the history and family history were strongly against this. The provisional diagnosis now was universal squamous eczema.

In the light of such a history I thought it very unlikely to find anything in the scales, and, furthermore, I knew from experience that in sectioning epithelial scales the microtome knife usually loses its keen edge. I therefore simply placed the largest of the scales in a bottle of alcohol and threw the smaller ones into the fire, and gave no further thought to them.

A few days later I saw the patient. The naked body presented a horrid appearance. The man was thickly covered with scales of variable size and of a creamy-white color. The larger scales measured over one inch in diameter and one-tenth of an inch in thickness; the small ones were thin and bran-like. Where the skin bent, as at the joints, a few scabs or crusts of a dirty color occurred. The man was covered with scales like a fish; even the palms, fingers, and toes were affected. A constant shedding of these scales was going on; a handful could be gathered daily.

Skin-diseases not being *mein Fach*, I took it for granted that the case was an extreme form of eczema, and made no further study at that time.

Four weeks later I learned that several of the patients in the ward with the case reported were afflicted with a cutaneous eruption, the source of which was ascribed to the "fish-scale-man." The physician in charge of the ward diagnosed the cases as scabies or common itch, but was not thoroughly satisfied with the diagnosis. I now determined to thoroughly examine these patients. A close search for mites was made, by myself and by several other physicians, but none were found. I may here add that, with the experience I have had since then, I can say it is no easy task to find itch-mites in an ordinary case of itch. I now determined, as a last resort in finding a cause, to examine the scales received four weeks previously.

The very first section I made revealed several mites and eggs, and the diagnosis of scabies was at once established. It is perhaps unnecessary to say that all the patients were at once vigorously treated for itch. The fish-scale-man was discharged, cured of his skin eruption, three weeks later, after having suffered for several years.

I now began to read up on scabies. I was surprised to find that it was not until about the year 1835 that the itch-mite was universally recognized as the cause of the itch. There is no uniformity in the scientific names of the itch-mite. Among entomologists the itch-mite is universally known as *sarcopeltis scabiei* (De G.). The size of the mite is variously given as from "very minute, almost microscopic," up to "the size of a pin-head." Itch due to other kinds of mites, as from the domestic animals, is rarely met with. The number of mites in an ordinary acute or epidemic case of itch is quite small, perhaps rarely exceeding one hundred adult animals.

In the numerous works on skin-diseases which I consulted I found no description of such an extreme form of the itch as presented in this case. Dr. Taylor's *Atlas of Skin Diseases* gave me a clew that soon put me on the right track. He says (p. 327): "European writers, particularly of previous decades, have described a severe form of incrusted eczematous scabies which they call scabies Norvegica or Norway itch. It is not seen in this country."

In Hebra's classical work on *Diseases of the Skin* (1868), a description was finally found. Hebra's first case was from Norway, and he therefore called it the Norway itch; he makes mention of several cases that have been observed in different parts of the world.

Sections from the shed epithelial scales are unique. The scales are riddled with burrows or passages of the mites, and are full of mites and eggs in all stages of development. Staining with picrocarmin gave distinct colorations; the tissue appeared red, the mites yellow; the eggs remained unstained, that is, white; the feces appeared dark-brown or black. In normal skin the outer layer stains a bright yellow. In the present case very little yellow appears in well-stained sections. This shows that the cells have not cornified. The epithelium, on account of the extreme irritation, grew and shed so rapidly that it had no time to harden.

In the literature within my reach I found no mention of any estimate of the number of mites present in a case of scabies Norvegica. I therefore determined to make a count and a calculation. The methods and details of the work were given in a paper read before the Indiana Academy of Science at the December meeting. The method pursued was, briefly, as follows: Pieces of scale of a definite size were stained in picrocarmin, imbedded in paraffin, sectioned and mounted in serials. Each section was diagrammed by means of an Abbe camera, the position or location of the mites and eggs being given. The count was made from the diagrams. Several counts were made in each case, and the mean of all counts was taken as an approximately correct number. A simple calculation gave the number for the whole body.

I was astonished when I reached the final figures, and hurriedly went over my calculation to see if I had not made an error. The number of mites and eggs is almost beyond belief. There were at least 2,000,000 mites and over 7,000,000 eggs (including empty shells) on the patient when he was admitted to the hospital.

THE TREATMENT OF Puerperal Eclampsia.

BY THEO. G. DAVIS, M.D.,
OF BRIDGETON, N. J.

My first case of eclampsia was treated by chloroform-inhalations; pilocarpine hypodermically; chloral and potassium bromid by rectal injection; and finally, morphine hypodermically, forcible dilatation of the os, and forceps-delivery of twins after thirty-two hours. A good recovery followed, but the length of time required to control the convulsions led me to seek a better and more rapid way of controlling them.

I have since had six cases, all but one being in primipare. Five were treated by the conjoint hypodermic injection of morphine, gr. $\frac{1}{2}$, and tincture of veratrum viride, gtt. 6, in 30 minimis of water to which

6 drops of alcohol had been added. In less than one hour the pulse was reduced from 140 to 70, and even, in some cases, to 60 per minute; the rigidity relaxed; the skin became moist; the convulsions ceased. In only one case was it necessary to repeat the injection. Heat was applied to feet and limbs, and labor was allowed to take its course.

In one case the convulsions began three hours after delivery; in one they occurred during labor, with the head upon the perineum; in one they occurred one day before labor; and in one case two weeks before delivery. In one case the child was still; in all, the mothers recovered.

None of these cases had had previous attendance. The urine was scanty and laden with albumin. The pulse was strong, full, and rapid; in this class of cases I believe morphine to be the best remedy, combined with tincture of veratrum viride, instead of venesection. I would not neglect hot baths and evacuants, when needed.

To emphasize the fact that all cases cannot be treated alike, I will report a seventh case, in which the symptoms and conditions were very different. Mrs. A., a primipara, was left in bed by her husband at 6 A.M., complaining of severe headache. On the husband's return at 12, noon, he found his wife still in bed, uncovered, cold, unconscious, and apparently dead. Hastily summoned, I found the woman cold, rather rigid, and almost pulseless, and having an occasional jerk of the muscles. It was in midwinter and the fire had burned out; this was rekindled, the body wrapped in blankets, artificial heat applied; strychnine, digitalis, whiskey, and nitro-glycerin given hypodermically, followed later by atropine. After seven hours a change for the better took place, and during the following day the woman was delivered of a stillborn child. She made a good recovery. All of the patients have since borne other children, without any manifestations of eclampsia.

NEW DEVICE.

A COMBINATION OF DROPPER AND HYPODERMATIC SYRINGE, WITH IMPROVEMENTS ON BOTH.

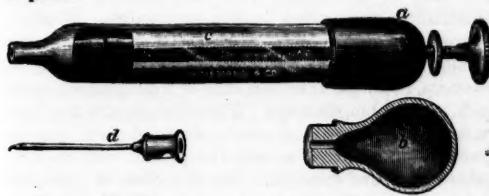
BY CARL SCHULIN, M.D.,
OF HELENA, MONTANA.

THERE is some difficulty in keeping a common hypodermic syringe perfectly clean and aseptic, on account of the piston and of the sharp angle between the lower end of the barrel and the attachment of the needle. Koch, in his syringe for the hypodermic injection of tuberculin, therefore dispensed entirely with the piston, substituting for it a rubber bulb, and also removed the attachment at the lower end of the barrel, allowing this to end in a blunt point, to which the needle is attached. (See figure, *a*.) When I first saw Koch's syringe I was struck by the similarity of its barrel to that of a dropper, and concluded to have Messrs. Tiemann & Co. make for me a combination of a dropper and a syringe for the use of the so-called hypodermic tablets.

As the attachment of the rubber bulb of the common dropper to the upper end of Koch's barrel (*c*) is not a thoroughly secure one, I replaced the plain bulb by a perforated stopper-bulb (*b*). This is easily applied, holds

fast, and has the advantage in being free from the fault of the ordinary dropper, that as soon as the point of the dropper is turned upward the fluid runs into the bulb, where it is liable to be contaminated.

Mr. Walter F. Ware, of Philadelphia, has devised for the same purpose quite an ingenious contrivance, a stopper with two canals and provided with two valves, alternating on the opposite ends of the canals. This stopper is put into the upper end of the barrel, and a common rubber bulb is applied over it. One can readily see how much simpler my device is and how much more cheaply it can be manufactured, and it works quite as well, because the air in the fine canal does not allow any fluid to pass.



As for the syringe, I did not approve of Koch's rubber bulb, but I disposed of the piston in another way. In the common syringe the upper end is provided with only a plain cover, but I made the cavity of the barrel continuous with and of the same caliber as that of the cover (a), so that it is possible to withdraw the piston fully into the cover and remove both together. In reapplying the cover the piston easily slips into the barrel and the difficulties attendant upon replacing the piston of the ordinary syringe are avoided. At the lower end of the piston the rod bears a plate of hard rubber which separates the leather of the piston from the liquid in the barrel, and which may also be drawn up into the cover.

To make a perfectly aseptic injection one first cleans the empty barrel (c) carefully, applies the stopper-bulb (b), and fills the barrel by suction. Then one applies a little rubber cap or the finger to the point of the barrel, removes the stopper-bulb, and applies the cover with the piston, thus transforming the dropper into a syringe.

For the use of hypodermatic tablets one fills the barrel partly with water, puts in a tablet, and dissolves it by shaking. From a scale on the barrel one may see how much water the barrel contains, and may inject either the whole or whatever fraction one pleases. With the stopper-bulb one may instil a given number of drops into an eye or administer solutions in the same way by the mouth, always having control of the dosage by the scale on the barrel and the known dose of the medicine which the tablet contains.

The barrel, when closed at the point by a cap and at the upper end by the stopper-bulb, may also serve as a bottle in which one can carry a soluble drug, which will thus always be ready for internal or hypodermatic use.

Messrs. Tiemann & Co., of New York, have undertaken to manufacture this combination of dropper and syringe in a small case, which will also contain a certain number of bottles for a selection of tablets.

Dr. Lawrence F. Flick has resigned from the Medical Staff of the Rush Hospital for Consumptives and Allied Diseases.

MEDICAL PROGRESS.

Sarcoma of the Dura Mater.—HARRIS (*Medical Chronicle*, vol. xviii, No. 1, p. 37) has reported the case of a woman, twenty-nine years old, in which, for two years, there had been progressive loss of power in the extremities of the left side, and for one year progressive impairment of vision. There was occasional headache and occasional vomiting. There had never been a convulsion, and there was no history of traumatism, syphilis, or tuberculosis. The woman was unable to count fingers, and could just distinguish light from shade. The pupils were dilated and failed to react to light. There was slight divergence of the axes of the eyeballs and slight nystagmus. There was bilateral optic neuritis. The naso-lateral fold was not so marked upon the left as upon the right. The upper lip could not be raised as high on the left as on the right. The tongue was protruded slightly toward the left. The plantar reflexes and the knee-jerks were present. On attempting to elicit ankle-clonus a few jerks would occur. The urine contained no albumin. The woman stated that she had been advised to have an operation performed upon the head, but she had declined. Two days after coming under observation she suddenly had a slight epileptiform attack and died. On post-mortem examination the skull-cap was found to be normal externally, but on its internal aspect, on the right side, three inches from the sagittal suture, two and a half inches behind the coronal suture, and with its anterior edge three-quarters of an inch behind the groove for the middle meningeal artery, there was an excavation an inch in diameter and extending to the outer table of the skull. The dura mater in a corresponding situation was somewhat prominent, projecting slightly above the surrounding level and adherent by its cerebral surface to a growth that apparently arose from the inner aspect of the dura and projected into the right cerebral hemisphere. The mass was wedged in among the convolutions of the motor area of the right side, displacing and compressing the convolutions immediately beneath it. It extended a distance of three and a half inches from the junction of the anterior and middle thirds of the middle frontal convolution anteriorly to the lower half of the fissure of Rolando posteriorly. Superiorly and internally the inner border of the growth was parallel with the great longitudinal fissure and corresponded with the sulcus between the first and second frontal convolutions; inferiorly it extended to within one-eighth of an inch of the horizontal limb of the fissure of Sylvius, a small layer of gray matter and pia mater intervening. On incision from above downward, the growth was seen to extend in the shape of a wedge for a distance of two inches, a thin layer of gray matter being traceable beneath, between which and the lateral ventricle a layer of white matter, only a quarter of an inch thick, intervened. The tumor was of grayish color and moderately firm in consistence; its cut surface presented a finely granular and slightly spongy appearance. There was nowhere evidence of softening. Microscopic examination of sections of the growth disclosed the structure of a sarcoma undergoing psammomatous change.

Rupture of the Esophagus.—HARRISON (*Lancet*, No. 3632, p. 784) has reported the case of a man, forty-seven

years old, with impaired appetite, who had been losing flesh for about six months. Two weeks before coming under observation he had an attack of diarrhea, and, following this, vomiting occurred in paroxysms at intervals of three or four days, together with eructations of fluid into the mouth. The amount of fluid rejected was considerable and led to the belief that there must be some dilatation of the stomach and possibly some obstruction to the passage of food from the stomach into the duodenum. The patient was conscious of a sense of accumulation of food in the stomach until relieved by vomiting. The abdomen was not distended and no neoplasm or enlarged glands could be felt. On palpating over the stomach, splashing sounds could occasionally be heard. There was no pain and there had never been hematemesis. Microscopic examination of the vomited matters failed to disclose the presence of blood or sarcinae. The bowels were regular. The urine presented no abnormality. There was no evidence of disease of the heart or lungs. Nineteen days after coming under observation, after the swallowing of some arrow-root and whilst in the act of retching and vomiting, the man was seized with sudden and intense pain in the lower portion of the left side of the chest. He remarked to his wife at the time that he felt something burst in his stomach. Collapse soon developed, the temperature becoming subnormal. A little later, subcutaneous emphysema of the neck, cheeks, and upper part of the chest appeared. The area of cardiac percussion-dulness was found to have disappeared, and this region and the upper portion of the left lung were hyper-resonant on percussion. Death took place about thirteen hours after the sudden access of pain and collapse. Upon post-mortem examination a sharply defined longitudinal rent, about an inch and a half long, was found in the walls of the esophagus just above the diaphragm. Each pleural cavity contained about a pint of dark grumous blood, having the odor and appearance of the contents of the stomach. The face, neck, the upper part of the chest, and the abdomen down to the groins were emphysematous. The left lung was partially collapsed. There was air in the loose areolar tissue of the mediastinum, and here and there also in the sub-pleural tissue. At the pyloric orifice of the stomach a small carcinomatous nodule was found and the whole circumference of the orifice was thickened and indurated.

Fibrinous Coagula from the Kidney.—At a recent meeting of the Society of German Physicians of Prague, v. JAKSCH (*Wiener medizin. Presse*, No. 5, 1893, p. 185) reported the case of a man, thirty-nine years old, who was seized with a chill, followed by fever and abdominal pains. There was tenderness in the loins and the signs of acute nephritis. In the course of a few days a sense of resistance became appreciable over the left kidney; the urine became alkaline and contained, in addition to fatty leukocytes, hematoxin crystals, tube-casts and epithelium from the pelvis of the kidney, dendritic coagula of fibrin. Echinococcus hooklets could not be found. As the patient progressed to recovery the abnormal elements disappeared from the urine. There was no evidence of the existence of diphtheria or tuberculosis in the genito-urinary passages or of hematuria or chyluria. A diagnosis of abscess of the left kidney, probably in association with an echinococcus cyst, was arrived at.

THERAPEUTIC NOTES.

For Chlorosis.—The Paris correspondent of the *Lancet*, No. 3633, p. 892, gives a résumé of the treatment of chlorosis pursued by Prof. Hayem, at the Hôpital St. Antoine. The patient is kept in bed for two or three weeks, and subjected to a regimen consonant with the state of the stomach as determined by chemical analysis. Generally there is hyperpepsia, which is best combated by a diet of milk and raw meat—a tumblerful of milk and about three ounces of scraped raw meat at noon and at 5 P.M. At the expiration of two weeks, considerable improvement will be noted. Now, and now only, iron may be exhibited. The best, because the most assimilable, preparation is the protoxalate, of which from gr. jss to iij may be given twice daily, at the beginning of a meal. Constipation may be overcome by enemata, or by the administration of mucilaginous seeds, such as psyllium plantago. When the appetite has been restored, three meals of easily digested food may be given daily. After a month, the patient will have regained color and strength. She may then be permitted to leave bed, at first for two hours, then for four and six, and, finally, for the whole day. In five or six weeks the cure will have been complete. Great stress is laid upon the treatment of the hypopepsia, or hyperpepsia, that may exist. In case of the former, a tablespoonful of a 1 per cent, solution of hydrochloric acid in half a tumblerful of sweetened water, should be given after meals, concurrently with the iron protoxalate.

Quinine for Cholera.—Based upon previous experience, HUBERWALD (*Jahrb. f. Kinderheilk.*, B. xxxv, H. 3, p. 245) recommends the employment of quinine in the treatment of cholera. A grain and a half may be given every two hours for twenty-four hours and repeated during a second twenty-four hours if necessary. If vomiting be present and beyond control the drug should be injected beneath the skin. In the gravest cases subcutaneous injection must be unconditionally practised. For this purpose the hydrochlorate or the sulphate, dissolved in acid and diluted with water may be employed. Still better is the use of the carbamidated hydrochlorate. Of this, from 12 to 15 grains, dissolved in an equal part of water, may be injected. The preparation may be also administered, dissolved in water, together with extract of glycyrrhiza, to children that cannot swallow cachets. This method of treatment is also applicable to cases of cholera nostras.

Venesection in Thoracic Aneurism.—At a recent meeting of the Hunterian Society of London, PITT (*British Medical Journal*, No. 1684, p. 744) read notes of nine cases of thoracic aneurism, with or without aortic incompetency, in which repeated venesection had been followed by more or less permanent relief of symptoms. In one case the patient was profoundly comatose and on three occasions was restored to consciousness by venesection. Venesection was advised as a remedy only for acute symptoms, such as pain, cough, and dyspnea, and not with a view to promote consolidation of the aneurism by clot. Cases of thoracic aneurism should be treated by rest, the recumbent posture, potassium iodid in gradually increasing doses, and with as limited an amount of fluid as the patient will comfortably take.

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ENTERIC FEVER WITHOUT PYREXIA.

THE medical student whose pupilage is not limited to the few years spent at a medical college passes through two fairly well defined stages. When he has graduated and has received a license to practise medicine, he feels that he has been taught practically all in medicine that is worth knowing. Soon, however, he learns that, for one reason or another (and in some instances the explanation is more obvious than in others), there are many conditions and phenomena of disease with which he is quite unacquainted. As, little by little, he adds to his fund of knowledge, he realizes more and more fully how much there is really yet for him to learn, and it cannot excite comment that he should at times be awed by the apparent extent of his lack of information.

Among the first illusions to be dispelled by practical experience is the one of expecting to find typical cases of a given disease. Far from realizing this expectation, the young practitioner is soon struck by the fact that the atypical is the rule. Even of such a well-known disease as enteric fever, there are so many anomalous manifestations that a large experience is necessary to have seen the disease in its most varied aspects. This is largely due to the fact that there is much about enteric fever that we do

not know—matters some of which are related to enteric fever alone, and others to the febrile process in its diversity of manifestation.

It is but too common to confound fever and pyrexia. So invariably are the two associated that, in the absence of the latter, one would be likely to exclude the former; and, as a matter of fact, actual demonstration of such an independence is wanting. The possibility of this dissociation, however, is forcibly brought to mind by the report of cases in which, in the absence of pyrexia, the other symptoms point unequivocally to the existence of enteric fever. Sufficient instances of the kind have now been recorded to make a distinct clinical group. The latest contribution to the subject is from the pen of DR. JULIUS DRESCHFELD (*The Practitioner*, No. 298, vol. 1, p. 272), who reports four cases that presented the classical signs and symptoms of enteric fever, with the exception of pyrexia. One of the cases terminated fatally, but there is, unfortunately, no record of post-mortem examination.

Why pyrexia should be absent from a case of enteric fever is, in the present state of knowledge, not possible of explanation. The anomaly is not to be explained by the superficial character of the intestinal ulceration, for in some cases hemorrhage from the bowel has taken place, and in one of DRESCHFELD's cases it is thought that perforation occurred. Until we know fully the mechanism of thermogenesis and thermolysis, as well as of thermotaxis, we can only speculate as to anomalies of pyrexia. In the absence of definite knowledge it may be logical to conclude that under these conditions there is some derangement of function of hypothetic heat-centers, in consequence of which these fail to respond to ordinary stimuli, either as a result of idiosyncrasy or of the action of some peculiar poison elaborated in the course of the febrile affection.

Whatever the explanation, or even in the absence of any explanation, it is important to recognize the clinical fact that there are cases of enteric fever, and probably of other infectious diseases as well, in which the symptom, pyrexia, which has hitherto been considered distinctive of the febrile state, may be wanting. This absence affords neither reliable prognostic indication nor definite therapeutic suggestion; but it calls for the exercise of the same care as if pyrexia were present. Perhaps we have here negative evidence of the fact that elevation of

temperature is not necessarily a dangerous manifestation.

THE THERAPEUTICS OF CHOLERA.

THERE is as yet no method of treating cholera of which in a given case it can be definitely predicated that it will lead to recovery. If a specific for cholera exist, it has yet to be discovered. With a correct knowledge of the etiology of the disease and a proper appreciation of the processes that attend it, we are, however, in a position to intelligently apply the lessons of experience and to analyze the results of a rational empiricism, controlled by demonstrated and demonstrable physiologic and biologic data.

Within the last nine months there have from time to time appeared in THE News numerous articles and abstracts dealing with the various phases of cholera. It is our purpose to-day to indicate those therapeutic measures that recent experience has demonstrated to be deserving of the greatest confidence should the necessity for their employment arise.

The administration of opium for the control of the diarrhea has resulted in almost universal disappointment. The reason for this becomes apparent when we consider the indication to be met. The object to be attained is not the checking of intestinal peristalsis, with the attendant retention of the infectious cause of the disease and the products to which it rapidly gives rise; but, on the contrary, the destruction or the expulsion of the bacteria and the neutralization or elimination of their toxic contents or products. For the purposes last named calomel has proved the most efficient agent. A single large dose may be given early. Small doses given repeatedly at a later period exert a useful influence in allaying irritability of the stomach and controlling vomiting.

Salol, from which at first much was expected, has also disappointed; and there is little reason to expect better results from other purely antiseptic agents, such as naphthalin and the naphthols. HUEPPE (*Berliner klin. Wochenschr.*, 1893, No. 7, p. 162), however, reports satisfactory results from the employment of tribromphenol, especially in mechanical combination with bismuth. Of such a preparation he administered an initial dose of 15 grains, followed by doses of $7\frac{1}{2}$ grains every two hours during the day and every three hours during the night, for a period varying from two to five days, when the dose was diminished.

It was hoped that tannic-acid enteroclysis would prove useful in neutralizing the poison generated by the cholera-bacilli within the bowel. While this hope was not literally realized, the injections rendered good service by reason of the heat and water, by their use, supplied to the body; as a matter of fact, the quantities of fluid employed (about two quarts) were not sufficient to reach beyond the ileocecal valve, conceding this to be passable by fluids injected into the rectum. The good accomplished by means of subcutaneous infusion of a physiologic (0.6 per cent.) saline solution (hypodermatoclysis) is likewise to be ascribed to the heat and fluid supplied. In a large number of cases of grave type and in the algid stage marvellous results (that were, unfortunately, only too often of but transitory duration) followed intra-venous infusion of the physiologic solution.

The four measures thus far named—calomel, enteroclysis, hypodermatoclysis, and intra-venous infusion—have proved themselves worthy of confidence and deserving of further employment in the treatment of cholera. What may be expected from biologic measures cannot yet be determined. Most of the studies in this direction seem to indicate that not much can be hoped for in the treatment of the established disease. It would appear as if the intoxication is so profound and so rapidly established that antidotes are unavailing unless given in the incipiency of the infection, *i. e.*, at a time when the diagnosis is scarcely possible. Whether or not protective inoculation, by strengthening the natural immunity, shall prove useful remains to be demonstrated. In the limited number of cases in which the anticholerin of KLEBS has been employed the results were comparatively favorable, but this method of medication is still in the experimental stage, and its place in our therapeutic armamentarium remains yet to be decided.

In a number of cases hot baths have been advantageously availed of in the algid stage; but, on the other hand, the fear is expressed that by the diversion of the blood to the surface of the body heart-failure may result.

UNMERITED CENSURE OF HOSPITAL PHYSICIANS.

A FEW days ago a child, suffering from an aggravated attack of diphtheric croup, was taken by its mother to the Children's Hospital in this city, but the officers of that institution declined to admit it.

We understand that a previous application at another hospital had been made, but we have no certain information as to this. The mother, on leaving the Children's Hospital, proceeded with the child to the office of the Board of Health at City Hall, coming in contact with a number of people in the street-car, as well as in the elevator at the Hall.

Great indignation has been expressed by some of the daily papers at this denial of refuge to the little patient; not on the child's account, however, but because of the exposure of other persons in the course of its journey to City Hall. The writers claim that the case should have been taken in and detained until the ambulance of the Municipal Hospital could be sent for. One journal says that this was the plain duty of the officials of the Children's Hospital, which "they wilfully refused to perform." This is a very grave accusation. Is it true?

Not long ago the managers of the hospital in question made special arrangements for the reception and isolation and proper treatment of cases of diphtheria and croup, but the Board of Health ordered their use discontinued and forbade the admission of such patients. An urgent appeal was recently made for the rescinding of this order, but it was unheeded.

Had this child been taken in temporarily, it is clear that no measures could have been adopted either for its treatment or for the protection of those already inmates of the house. There was no certainty whatever as to the length of time that might elapse before the arrival of the ambulance of the Municipal Hospital. Short or long, it would have been a period of peril for all those within the walls of the institution.

What should have been done, and what would have been done, but for the mandate of the Board of Health? The child would have been at once taken in, isolated, and subjected to proper treatment, with every appliance for preventing the extension of infection from it. Its clothing would have been destroyed. The Board of Health would have been immediately notified, so that it might enforce the disinfection of the premises where the disease had existed.

Very possibly those who so readily accuse the officials of the Children's Hospital of wilfully refusing to perform a plain duty are unaware of the splendid record of martyrs of our profession, of men who have lost their lives by their devotion to just such cases as that of this child. All over the world

these risks are daily taken by physicians, calmly and without either hesitation or bravado. We can of our personal knowledge declare that in this instance there was no question on the part of the officials of their own safety or convenience. They simply obeyed the mandate of the Board of Health, and protected those who were already under their charge.

The plain common-sense of the matter is, and we speak from practical acquaintance with hospital management, that every such institution should be provided with the proper wards and other appliances for the isolation and treatment of diphtheric cases, and not be forbidden, but encouraged, to admit and treat them. We feel assured, although the point is not one which admits of proof, that many children have lost their lives because they were debarred from the benefit of treatment at the Children's Hospital by reason of the mandate of the Board of Health, and that there has been no compensatory saving in any way.

EDITORIAL COMMENTS.

The Dresden Sanitary Conference.—Although the articles of the international convention signed by ten of the nineteen powers represented at the recent Dresden Conference have not yet been officially promulgated, the *British Medical Journal*, No. 1687, p. 909, presents a summary of the chief provisions. The various Governments agree to notify the contracting States of every appearance of a focus of cholera in their respective territory, specifying the locality and the extent of the invasion, and designating the measures that have been adopted for the limitation of the outbreak. Foreign countries shall only put in force restrictions against the productions of the infected area and not against those of the whole country of which that area forms a part. Prohibitions against imports shall only be applicable to objects capable of transmitting the disease. A list is given enumerating the articles considered dangerous. This list, it is believed, contains only a comparatively small number of articles, and will not interfere with the transport of manufactured goods, textile or woollen fabrics, food-supplies, and fruit. The measures prescribed by which a Government may protect its frontiers, or which it may adopt against an infected area within its boundaries, are founded on medical inspection, disinfection of soiled linen, sanitary passports, and surveillance of passengers in the country to which they go during the time corresponding to the incubation of cholera, which is arbitrarily fixed at five days. Passengers on ships will not be isolated or disembarked unless there be cholera on board or there has been a case within seven days. Should isolation be necessary, it is to be assumed that it will be carried out by division into small groups, so as to avoid the detention of large numbers should a secondary outbreak occur. Special regulations may

be made and special precautions be taken in the case of ships carrying emigrants, by the country receiving these. In regard to the navigation of the Danube, provisional regulations have been made until such time as the town of Sulina, at its mouth, shall have provided itself with a proper water-supply. A further conference is to be held at Paris at a time to be announced.

A Professorship of Mental Diseases, etc., at the University of Pennsylvania.—The Trustees of the University of Pennsylvania have elected Dr. Charles K. Mills, Professor of Mental Diseases and of Medical Jurisprudence. Public and professional sentiment has become more and more pronounced in favor of both the didactic and clinical teaching of insanity to medical students and to physicians taking post-graduate courses. As long ago as 1871, the Association of Medical Superintendents of American Institutions for the Insane, now the American Medico-Psychological Association, adopted resolutions strongly urging the delivery by competent professors of complete courses of lectures on insanity and on medical jurisprudence as connected with disorders of the mind, and the subject has again and again been brought before the profession by societies and journals. It is especially important, as is said in a recent circular issued by the New York State Commission in Lunacy, in view of the fact that in a large majority of cases the presence of mental disease, in the first instance, must necessarily be determined by the general practitioner—usually the family physician. Dr. Mills has long been known as a profound student of insanity, and is most admirably fitted by experience and investigation to carry forward the work to which he is called. His lectures on mental diseases will be chiefly clinical and will be open as an elective course, like other clinical lectures, to the third and fourth year men. The Professorship of Medical Jurisprudence will include the delivery of lectures, which will be compulsory for the students of the auxiliary department of medicine and elective to the fourth year men. We congratulate the University and the profession on this progressive and excellent movement.

The Danger of Anesthetization by the Operator.—According to the *Canadian Practitioner* of last month, a house-surgeon of a Toronto hospital "decided to administer a small quantity of chloroform before operating" on the frostbitten toe of an able-bodied laborer. After giving a little more than half a dram, "the doctor noticed that the pulse suddenly became weak and the breathing irregular," and "energetic efforts to revive the patient failed to prevent death." Now this house-surgeon is described as "a thoroughly competent, careful, and reliable man." But if he was competent he knew that chloroform might kill, and no careful man would have run such a risk. On this occasion he surely did not prove reliable.

The writer winds up by saying: "The lesson to be learned is plain, and in the interest of both the profession and the public: No one should attempt, in any particular case, both to administer an anesthetic and to perform an operation." If this lesson was still to be learned in Toronto, the profession there cannot have noted the current medical literature of the last forty years.

We are told that it was fortunate for this house-surgeon that an autopsy was made by competent and trustworthy men, who were able to exonerate him from all blame, because they found "brown atrophy" of the dead man's heart. He would have been more fortunate if his teachers and chiefs had warned him not to take such a risk.

A Question of Memory or of Intellectual Fitness.—The letter of Dr. Ball, in another column of this issue of THE NEWS, raises an important question. There can be no doubt that our present method of final examinations places a reward upon the simple mnemonic power of the student, out of all just proportion. A slow student, who has ploddingly but thoroughly done his work, acquiring a first-hand perception of disease and therapeutics, is far and away distanced by some flashy "crammer" for examinations who happens to be possessed of a good memory. But the cure advocated by Dr. Ball is opposed by the underlying fact that our system of medical education is still too much based upon the didactic lecture, and that those who are in the teaching business to make money, or its equivalent, an enlarged consultation-practice, wish great droves of students, and wish to make them into practitioners with the least trouble possible. To carry out the excellent and desirable plan suggested, the teaching body must be tremendously enlarged, the character of the work revolutionized, the personal acquaintance of teacher and student must be intimate, and instead of talking at a half thousand men one knows nothing about, the pupil must be drawn out, educated in an etymologic sense, and made himself to learn by the teaching of facts and under the guidance of the instructor. All this requires an endowed institution, the limitation of professorial salaries, and medical education made both genuinely medical and truly educatory—not the monopoly of income and fame by mercantilism masquerading as medical education.

Conference of State Medical Examining and Licensing Boards.—We desire to call especial attention to the announcement in another column of THE NEWS of the Third Annual Conference of State Medical Examining and Licensing Boards, to be held at Milwaukee, June 7, 1893. Much good has been accomplished both for the profession and for the public by the organization in many States by legislative enactment of Boards of Medical Examination and License, in whose hands is placed the responsibility of determining to whom shall be intrusted the care of the health and lives of the people. It is earnestly to be hoped that before long such salutary regulations may be adopted by every State and Territory of the Union. From little beginnings the movement has grown to mighty proportions, and its influence for good cannot be adequately estimated. A number of most important questions will be presented for consideration at the coming conference. The names of the officers constitute an indication of the dignity of the body and furnish a guarantee of the character of the work that may be expected.

The Nobility of Medicine is admirably illustrated in the work of the Duke Karl Theodor, of Bavaria, who recently performed his two thousandth successful opera-

tion for cataract, at Munich, where he has fitted up and maintains an institution for the study and cure of the diseases of the eye. The professional life of the Duke is a most interesting one. Graduating in 1872 from the University of Munich, he immediately entered upon the gratuitous practice of ophthalmic surgery amongst the poor. Near his château he founded a district hospital for the treatment of the diseases of the eye in which he performed many operations, his wife, the Duchess, acting as chief nurse. In the summer he established an ambulance hospital in the Austrian Tyrol. Except in peculiar cases, in which a fee is required, none but the poor come under treatment; all that can pay being transferred to colleagues. In addition to his noble work of philanthropy, Karl Theodor has made numerous valuable contributions to medical literature.

Credit to Whom Credit is Due.—A correspondent calls attention to the fact that the admirable police and medical arrangements during the recent naval review were essentially a reproduction of those successfully adopted in the city of Philadelphia in 1887, at the time of the Constitutional celebration. The guiding idea of the plan is thorough organization with centralization of authority: a practical head, military precision, telegraphic or telephonic communication between all points, police patrols, sanitary stations provided with ambulances and under the charge of surgeons.

"The Single Remedy," praised by the homeopaths, is well illustrated by *The Hahnemannian* for May, 1893, in which seven or eight pages of remedies for cholera are enumerated, all solidly printed one after the other, and in the customary medieval jargon of contractions that would give a phonetic speller an epileptic fit of envy. If the single remedy is the proper thing, which of the several hundred so amusingly listed should it be? Why not mix 'em all up and label the mixture, *OMNIA*, like Swan, the New York homeopathic pharmacist?

A Willing Dupe.—Scarcely has Mr. Stead been disabused of his delusion that carcinoma can be cured by means of bottled electricity and the like, than he becomes the willing victim of another delusion. This latest consists in the discovery of a fourth dimension, the practical value of which lies in the power of certain persons (of whom Mr. Stead is naturally one) to communicate not only directly with friends at a distance, but also with those of other spheres. To us here it would appear as if Mr. Stead's mental condition might become a matter for consideration by a commission in insanity.

Protective Inoculation against Cholera.—It is announced that M. Haffkine has inoculated some four hundred persons in India with cultures of comma-bacilli, according to the method elaborated by him, for the purpose of conferring immunity against cholera. No unpleasant symptoms were observed. An opportunity of demonstrating the protective value of the inoculations has not yet offered.

Munificent Philanthropy.—Baron Nathaniel Rothschild has offered to present to a society of charitably disposed persons in Vienna, who were endeavoring to collect

funds to found an asylum for patients affected with diseases of the chest, his château, together with an extensive estate and pleasure-grounds, situated in the Styrian Alps, and worth 5,000,000 florins (\$2,100,000).

The Medical Examiners Bill passed by the Pennsylvania Legislature several weeks ago has been ratified by the Senate and now goes to the Governor for his signature, which there seems no reasonable doubt it will receive.

SELECTION.

AMUSIA.

THE term amusia, recently introduced into medical nomenclature, may be said to denote with regard to the musical faculty about what the word aphasia, in its most comprehensive use, imports with regard to the faculty of speech. Some interesting examples of loss or impairment of the ability to produce or to comprehend music are on record, and a condensed account of the more important observations bearing on the subject is given in a "Revue Générale," by Dr. Paul Blocq, published in the *Gazette hebdomadaire de Médecine et de Chirurgie* for February 25th.

Aphasia is not always accompanied by amusia, as was mentioned by Bouillaud so long ago as in 1865. There is a well-known story of a certain aphemic who sang the *Marseillaise* with the only articulation sound that he could make, and Bernard speaks of an aphasic who sang that melody and the *Parisienne* with the substitution of *tan*, *tan*, *tan* for their proper words. Proust had a patient who could write music, although incapable of reading it. A still more curious case was recorded by Grasset in 1878, that of an officer who, while he could articulate only *pardi* and *b* in his attempts to speak, could sing the words of the first verse of the *Marseillaise* with the utmost correctness. Charcot's authority is given to the story of a trombone-player who lost his capability of performing on the instrument, although he had preserved all his other faculties.

Blocq credits Knoblauch with having established the autonomy of such a pathologic state as amusia in 1888. In 1891 Wallaschek made an important classification of the varieties of amusia, distinguishing motor amusia, in which the patient comprehends music, but has lost the power of singing; sensory amusia, in which the subject can no longer distinguish sounds; paramusia, in which the subject sings, but with mistakes in time and note; musical agraphia, or loss of the power to write notes; musical alexia, loss of the ability to read music; and musical amimia, loss of the power of playing on an instrument. Blocq, like Onanoff, adopts an analogous classification, distinguishing a receptive, or sensory amusia, and a motor or expressional amusia, the former including auditory amusia and musical alexia, and the latter comprising true amusia (loss of the power of singing), musical amimia, and musical agraphia. True sensory amusia may be termed musical deafness, and musical alexia may be called musical blindness.

Concerning the pathologic significance of amusia almost everything is yet to be learned, but it is certain

that Blocq has, by his analysis of the data now in our possession, done much to facilitate the necessary investigation.—*N. Y. Med. Journ.*

REVIEWS.

HUMAN MONSTROSITIES. By BARTON COOKE HIRST, M.D., Professor of Obstetrics in the University of Pennsylvania, and GEORGE A. PIERSOL, Professor of Histology and Embryology in the University of Pennsylvania. Part IV, illustrated with ten photographic reproductions and forty-six woodcuts. Philadelphia: Lea Brothers & Co., 1892.

In the concluding volume of this fine work is completed the consideration of the composite, the double parasitic, and the triple monsters.

The best-known instance of the dicephalic monstrosity that has lived for any length of time is that of the Tocci boys, born in 1877 and still living. All the others (Marie-Rose Drouin, Rita-Christina, etc.) except the Scotch boys (1490) who lived twenty-eight years, lived but a short time. Ischiopagi also do not long survive birth, owing to atresia of the urethra and anus. Of pygopagi the examples are more rare, but the chances of life are good. Of this class, especially to be noted are the Hungarian sisters Helen and Judith (b. 1701), who lived twenty-two years; the North Carolina negro twins, Millie and Christine, who were born in 1851 and are still alive; and the Bohemian twins, born in 1878.

With the pygopagi ends the study of the terata kata-didyma, or double monsters divided from above downward. In the terata anadidyma the division is from below upward. The dipygus has duplicity of the pelvis, the pelvic extremities, and the genitalia, but a typical dipygus with two equally developed pairs of legs is unknown. The best-known approximations, Blanche Dumas and Mrs. B., are described and illustrated. Besides dipygus, we have in this class the syncephalus and craniopagus, with their more common varieties, described and illustrated.

In the terata anakata-didyma there is a separation of the upper and lower bodies, the junction being confined to the region between the umbilicus and the head. Varieties of this class are the prosopothoracopagus (the union is by the upper abdomen, the chest, and faces, the spinal columns being distinct); the thoracopagus and sternopagus; the omphalopagus and xiphopagus, the best-known example of the latter class being the Siamese twins. An excellent account of the life, death, and necropsy of Chang and Eng is given. Four operations have been performed for the separation of omphalopagi or xiphopagi. The authors are of the opinion that in future, owing to improved technique, etc., better success awaits these attempts.

Of double parasitic monsters we have accounts of the heterotypus, the heteralius, polygnathus, polymelus, endocyma, diprosopus parasiticus, dicephalus parasiticus, ischiopagus parasiticus, dipygus parasiticus ("la dame à quatre jambes," Laloo, etc.), syncephalus parasiticus, craniopagus parasiticus, thoracopagus parasiticus, polygnathus, epignathus, and endocyma.

Of triple monsters, only two or three instances are on record.

A most valuable addition to this volume is the bibliography, which shows the large measure of popular interest that has always existed in reference to this subject.

We have ten more of the marvellously beautiful plates, showing vividly the appearance of dicephali omphalopagi and heteropagi.

Not a word of criticism is allowable in reference to this superb work, and authors and publishers are to be congratulated upon its execution and completion.

A SYSTEM OF GENITO-URINARY DISEASES, SYPHILLOLOGY, AND DERMATOLOGY. By Various Authors. Edited by PRINCE A. MORROW, A.M., M.D., etc. With illustrations. In three volumes. Vol. I. Genito-urinary Diseases. 8vo, pp. 1074. New York: D. Appleton & Co., 1893.

THIS latest addition to the already abundant literature of the surgery of the genito-urinary organs is a large and handsomely gotten-up volume. It is the outcome of the labors of thirty-one authors: New York furnishing twenty-three; Boston, three; St. Louis, two; Chicago, Philadelphia, and Montreal, one each. This multiplicity of writers has necessitated a somewhat minute subdivision of the subject-matter. We find the diseases of the penis treated in one section, diseases and injuries of the urethra in another; those of the scrotum are separated from those of the testicle, which organ has three distinct articles devoted to it, besides a special one on hydrocele. Endoscopy, or the specular examination of the urethra, and cystoscopy, or that of the bladder, are likewise placed apart from one another. The subject of gonorrhœa is divided up under six distinct headings.

With the teachings of this book we have no fault to find; they seem to be sound, and in accord with the views in general acceptance at the present day. The article on Stone in the Bladder, by Dr. Cabot, of Boston, is a particularly good one; and Dr. White, of Philadelphia, discusses Urethral Stricture with clearness and force. But we do not find in the remainder of the work such novelty of theory, of fact, or of statement, as should warrant us in ranking it above other and less pretentious treatises which are already regarded as standards.

The title of one of the sections, "The Cystites"—the suppurative inflammations of the bladder—seems to us to be unfortunate, as conveying the idea that these lesions differ in kind and not in degree. We object also to the term "Urinary Fever" as meaningless and unscientific. Another heading, "Tuberculosis Uro-genitalis," is awkward and pedantic; it is certainly neither good American, good English, nor good Latin.

We note with regret the tendency on the part of most of the writers to take what a well-known litterateur has recently described as a colonial attitude toward foreign authorities. We find no mention of some important records of the experience of American surgeons, which would have added materially to the value of this work.

As might be expected, the style of the different articles varies greatly. In some of them there is very careless writing. Thus, we are told that non-infectious urethral discharges "are of comparatively little importance, and this in proportion to the causes from which they arise" (p. 143); "The rigid urethral walls do not collapse like in the deeper portions" (p. 209); "We are indebted to

Bunn for the anatomical changes in gonorrhœal conjunctivitis" (p. 227); "the front urethra" (p. 416). Besides these blemishes, there are very many misspelt proper names, and a noticeable number of typographic errors. One of the contributors will find his name spelt in three different ways.

In some of the articles authorities are quoted by name only; in others the references are also given in the text; while in still others the bibliography is placed at the end in tabular form, but without either chronologic or alphabetic arrangement.

With excellent illustrations, clear type, and good paper, the appearance of this volume is highly attractive.

TRANSACTIONS OF THE AMERICAN SURGICAL ASSOCIATION. Volume X. Edited by J. EWING MEARS, M.D., Recorder of the Association. Philadelphia: Wm. J. Dornan, 1892.

It is impossible, in the limited space at our command, to call attention to the points of interest of each and all of the goodly number of papers contained in this volume, all of which are of a high order of merit. Not only the papers themselves, but the discussions which they brought forth from the distinguished body before which they were presented, cover such a wide and varied field, and record so much that is interesting and valuable as contributions to the literature of surgery, that we feel that we are only paying a just tribute when we say of this volume that it is a worthy companion to those which have represented the work of the American Surgical Association in former years.

Merely to allude to some of the papers, that by Dr. John B. Roberts, on "The Treatment of Fractures of the Lower End of the Humerus and Base of the Radius," deals with a subject of interest to the general practitioner, as well as the surgeon, and elicited a lengthy discussion. A paper by Dr. N. P. Dandridge, of Cincinnati, on the "Surgery of the Tongue," is an excellent, comprehensive view of a subject of great interest. Dr. Robert F. Weir's contribution on "Gastrorrhaphy for Diminishing a Dilated Stomach," is a valuable addition to the more recent advances in the surgery of that organ; and Dr. Dennis's report of some cases of "Cerebral Tumor," in which he records the results of medical treatment, is a striking communication on a subject that has attracted much attention in recent times. We regret that we cannot do more than mention the other contributors, Stimson, Cabot, Warren, Nancréde, M. H. Richardson, E. H. Bradford, Homans, Carmalt, McCann, Weeks, Wharton, Gerrish, and Deaver—all of whose papers contain much that will repay the reading, as will also the excellent address of the President, Dr. Conner.

Worthy of passing note here is a brief historical sketch at the end of the volume, of the sponge used at the first administration of ether for anesthesia, by Dr. W. T. G. Morton, at the Massachusetts General Hospital, in 1846. Accompanying the sketch are two very good phototypes of this sponge.

In conclusion, we take pleasure in saying that the volume gives evidence of careful editorial work, and that its appearance is as attractive as that of its predecessors.

A COMPLETE LIST OF THE OFFICERS AND FELLOWS OF THE AMERICAN SURGICAL ASSOCIATION, TOGETHER WITH AN ALPHABETICALLY ARRANGED INDEX OF VOL. I-X, 1880-1892. Philadelphia: William J. Dornan.

THIS list, which is published in pamphlet form, also appears in Vol. X of the *Transactions*. It is an excellent idea, for library purposes, to have published it separately. As the title implies, it contains not only the roll of the Officers and Fellows of the Association, but an index, arranged both as to name and subject, covering the ten volumes which have been issued. On looking through this index one cannot help being impressed by the amount of valuable work that has been done by the Association. It will doubtless be very convenient to writers and others having occasion to consult the *Transactions* to have this index to refer to.

NOTES ON THE NEWER REMEDIES. By DAVID CERNA, M.D., PH. D., Demonstrator of Physiology in the Medical Department of the University of Texas, Galveston, etc. Pp. 177. Philadelphia: W. B. Saunders, 1892.

THE enormous number of new drugs and proprietary pharmaceutical preparations forced upon the market within the past few years renders any attempt to select those of undoubted value for such a compilation as the present volume a task of considerable magnitude. Dr. Cerna, by his extensive studies and experimental research in the laboratories of the University of Pennsylvania, has been admirably prepared for such a work, and he has demonstrated his ability to carry it through in a satisfactory manner. His "Notes" compare favorably with recent works of a similar nature. However, in his effort to condense and eradicate he has left such a skeleton in a number of instances that the information advanced can be of but little practical service to the therapist. Mistakes also have been made, and some unworthy drugs have been included among the worthy. Notably is this the case with the so-called alkaloid "stenocarpine," which two or more years ago was proved to be nothing more than a mixture of cocaine and atropine. No attention whatever has been called to the extremely unfavorable effects that have frequently followed the use of tuberculin injections; nor is the really extensive applicability of ichthyl to surgical and gynecologic purposes indicated. Notwithstanding, Dr. Cerna's "Notes on the Newer Remedies" will bear a second reading, and it is to be hoped that the intimation that the work may be the "groundwork for a larger volume in which the physiological and therapeutic actions of the new medicaments . . . will be duly discussed," will amount to a realization. There is room for such a volume.

SYPHILIS AND THE NERVOUS SYSTEM: BEING A REVISED REPRINT OF THE LETTSOMIAN LECTURES FOR 1890. By W. R. GOWERS, M.D., F.R.C.P., F.R.S., etc. 8vo, pp. 131. Philadelphia: P. Blakiston, Son & Co., 1892.

In the preface to this revised and enlarged reprint of the Lettsomian Lectures for 1890, Dr. Gowers acknowl-

edges his indebtedness to Dr. D. D. Stewart, of Philadelphia, for assistance in reading proof and preparing the complete index which adds so much to the facility of reference. The subject is, of course, both philosophically and practically treated in that rare style of which half a dozen English-writing physicians seem at present to be the only masters. Like all really great authors, Dr. Gowers modestly prefers not to assert originality rather than to risk claiming credit for the work of others. The present status of knowledge is fully exhibited. Among the important distinctions made, which show "what's in a name," is the restriction of the term "specific" to lesions not only "luetic" in origin but exhibiting characteristics not found in any other disease.

Admitting that symptoms may be relieved and overt lesions prevented or healed, Dr. Gowers does not consider syphilis curable in the sense that the virus that lies back of lesions and symptoms is ever fully eradicated or antagonized. Furthermore, lesions not specific, but secondary, may be induced, and these may be of such a nature as to cause irreparable damage. Secondary lesions, too, may give rise to continuing symptoms after the specific cause has been contracted, so that long-continued treatment by iodides or mercury may be a grave and dangerous mistake. Long-continued use of iodide may induce tolerance on the part of the morbid cells or morbid agent, and an instance is given in which a cerebral gumma developed and proved fatal while the drug was being taken. Three elements of the morbid process furnish indications for treatment: the specific cause and lesions; the secondary damage to nerve-elements, and the symptoms due to the latter. Empirical therapeutics is not to be despised.

DISEASES OF THE EYE. A PRACTICAL TREATISE FOR STUDENTS OF OPHTHALMOLOGY. By GEORGE A. BERRY, M.B., F.R.C.S. ED. Second edition, revised and enlarged, with colored illustrations from original drawings. Philadelphia: Lea Brothers & Co., 1893.

The first edition of Mr. Berry's treatise appeared in 1889 and contained 650 pages of text. The value of the work has already made necessary a second edition, which has given the author the opportunity for revision and increase of the number of pages to 705. In the present volume, the chapter on the Examination of the Eye has been placed at the commencement, where it belongs. It was sadly out of logical order in the first volume. A noteworthy feature of both volumes is the insertion directly into the text of colored illustrations. Many of these are certainly most excellent, but some, we are forced to confess, are disappointing. "The normal fundus," p. 35, is very perfect, but if we had not been assured of the fact that the figure on page 36 was the "normal macula," we should have supposed it to be the picture of a very pathologic macula. The illustration of the early stage of albuminuric retinitis is beautiful and correct, as is also that of episcleritis, but nothing can excuse the abominable representations given of subconjunctival dislocation of the lens (p. 180), of opaque nerve-fibers (p. 224), and of conical cornea (p. 144).

The chief criticism of the work, and it is one that strikes us strongly, is the non-realization of the promise of the title-page. "A practical treatise for students,"

the work may be, if the student is one of the hundred or thousand who has been well endowed by Nature, intellectually, and has had the best preliminary educational advantages. The English medical student, we hope, may comprehend the pages of algebraic and mathematic formulas that may adorn but do not, to the general, enlighten. There is almost everywhere too much taken for granted, and the "student" will too frequently find his judgment dazed rather than clarified. There is a lack of plain, every-day explanation, such as may be readily comprehended by the untutored and practical mind. If, for example, one not instructed in the matter should attempt to refract a pair of eyes, following only the directions given, he would find himself landed in a haze of indefiniteness and a multitude of doubts.

The mention of refraction recalls the fact that Mr. Berry, like most of our European confrères, gives us no instruction as to the use of a mydriatic, and hardly alludes to the thousand difficulties and inexact results that we find without its use, and the intricate problems that surround the details of finer refraction-work as carried out in this country. Nothing is said as to the Javal and Schiötz ophthalmometer, nor of Knapp's roller-forceps operation for trachoma.

Space does not permit a detailed review of this, in many respects, admirable treatise, which, despite its obvious faults, has many peculiar merits, and will henceforth occupy and hold its place as one of the best treatises upon the subject we have. But we cannot forbear emphasis of the fact that its methods and merits make it a helper for the specialist rather than a handbook for the general practitioner, the beginner, or student. It is needless to say that the volume is admirably reproduced so far as the printer and publisher are concerned.

SPECIAL ARTICLE.

THE PRACTICE OF MEDICINE IN ONTARIO, CANADA.¹

BY J. P. ARMOUR, M.D.,
OF ST. CATHARINES.

THE practice of medicine for the 2,112,000 citizens of this province is placed in the hands of 2,600 physicians, the druggists, and patent medicine-venders. To the profession is given the exclusive privilege of diagnosing and prescribing for the ailments of the citizens; the druggists are legalized to dispense and sell drugs to the public; while the profits resulting from the sale of patent medicines are open to every citizen.

When we take into consideration the arduous labor and expense connected with the preparation, and the close application necessary while attending to the duties of the practice of medicine, there are perhaps no other professional men so poorly remunerated for their services as those engaged in the practice of medicine. This is not owing to lack of privilege—the law and its administration favor a liberal remuneration—but it is entirely due to the misuse of the privileges with which the profession is intrusted. The chief causes of lack of remuneration are overcrowding, charity practice, and general bad business management.

¹ Abstract of an address delivered before the Majoiia District Medical Association.

The public is impressed with the view, and it is but the reflection of expressed professional views, that the practice of medicine is the most remunerative calling we have. The pupils of our schools have seen the doctor occasionally called into their family, for which he had been paid what appeared to them a very liberal fee—but they thus incidentally learn that the doctor is a very busy man; that he has been on duty night and day; that several horses are requisite to drive him to his patients; and conclude that such a privilege is worthy of their highest ambition, and they determine to sacrifice all else to be a doctor.

There is another view of this. Ask a dealer in any of the more expensive luxuries who are his most liberal patrons, and he will tell you the merchants and manufacturers, and that physicians rank only among the farmers and mechanics. A banker will give you the same reply. Examine for yourselves the holders of bank and other stocks, and you will find practically none held by members of the medical profession, unless acquired by marriage or inheritance. Ask the county registrars what proportion of real estate is held by the profession, and they will tell you, very little. From the retail dealer in the common necessities of life you will learn that physicians are moderate and economical livers. The question arises: What has become of these large earnings? The answer is: They have never existed—they are purely fictitious.

The insane rush of young men, and women, too, into the profession is chiefly owing to the extravagant puffing of a considerable portion of its members regarding the financial results of their labor. I have a couple of physicians in mind with whom I was familiar both as a youth and after entering the profession, whose careers are somewhat typical of the "booming" class. The one was the leading physician of a large town. He claimed and was generally accredited with doing a practice of \$25,000 a year. He lived quite inexpensively, except in the matter of horses, several of which he always kept to encourage business, and after struggling with a practice of this kind for twenty-eight years, he suddenly collapsed, leaving his creditors in for over \$20,000. The other practised in a small village, and for years had done a tremendous practice; kept half a dozen horses, slept little, and had rarely time to take his meals; he lived quite inexpensively, except in the matter of horses; he took but one holiday during his whole career; and he affected, and was generally supposed to be possessed of, fabulous wealth; and after a laborious professional life of forty years, departed, leaving an estate valued at less than \$5000. I can name a score of men in the profession to-day, who have been lured there by the boasting of these two. This unmanly habit afflicts the profession to a disgraceful extent, and does it more injury than any other affliction to which it is subjected.

A large portion of the legitimate income of the practice of medicine has come to be looked upon by the public as a gratuity the profession owes and is in duty bound to contribute to the poor and dishonest afflicted. This pernicious system of indiscriminate gratuitous medical service has arisen chiefly from a desire to promote the narrow, selfish interests of individual members. In most of the centers of population, hospitals exist for the care and treatment of the afflicted. As they are at

present conducted, they are so many encroachments on the legitimate earnings of the profession, and a direct burden on its charity. The grocer, the butcher, the merchant, the lawyer, the druggist, are all liberally paid for what they do or supply for their maintenance, but the best medical skill is always at their disposal, free. In the chief centers, where this custom has originated, those connected with medical schools find it to their advantage to give their services gratuitously to hospitals and dispensaries, that they may have abundance of clinical material for their students. They are indirectly well paid for these services by students' fees and the professional prestige that attaches thereto; but it is a serious loss, not only to other members living in these centers, but to the profession at large, on account of the precedent it establishes. In this way a public opinion has been created and is maintained, exacting gratuitous service for all who seek it.

It is difficult to understand why the whole burden of this charity should be assumed by the profession. It is not so in European countries. There they have the parish doctor, who is paid to attend the indigent; but here the rivalry for personal popularity by the exhibition of competitive charity has resulted in the whole burden being borne by the profession. What other calling allows a large portion of the means of livelihood to be exacted as charity? It is perfectly clear that the medical men themselves have established and are perpetuating this practice of costly charity that should be borne by the whole community.

We have in this connection the contract labor for lodges, etc., by which physicians place themselves under the patronage of the worthy chief wranglers, whereby they are privileged to examine for admission, attend in sickness, and supply them with medicine, for an insignificant percentage of the regular fees for such service. Many of these fraternal societies live on the charity contributed by physicians, and at the same time hold them under great obligation for their patronage; and still we hear of physicians entering into competition to secure the burden of bestowing this charity with the vague hope of indirect personal benefit, which we all know rarely, if ever, materializes. Those who are not connected with such societies know how the members will occasionally come to them and tell them that they have their lodge doctor who is bound to attend them free, but they wouldn't have him to attend their dog, if it was ill—in just the way this same class of patients speak of other physicians, who have not bound themselves to bestow on them their semi-gratuitous professional skill. No one will question that this contract labor is injurious to the financial interests and lowering to the dignity of the profession, and few will question that it is a personal disadvantage to those engaged in it.

The habit many physicians have of teaching their patients to prescribe for themselves, is an injury both to the profession and the public. In this way the general public has become familiar with most of the leading remedies, which they buy from the druggists and use to excess, to the druggists' profit, the physicians' loss, and the patients' injury. Most of the narcotic habitués are the result of this habit.

Another fad has arisen, in recent years, by which the interests of the profession are being undermined. Physi-

cians are being deluged with samples of palatable mixtures for distribution among their patients, which are intended to be, and are being dispensed by the druggists as family medicines. The profession is thus used as indorsing and advertising agents of a branch of medical trade that usurps the business interests of their own calling.

From a business point of view, the profession may be said to retail professional skill. How does it stand in comparison with other businesses in the matter of charging up and collecting accounts? The more successful retail business men are carrying on business as nearly as possible on a cash basis, and those who do a credit business render their accounts promptly and exact a settlement in a reasonable time. With the profession it is altogether different. Little or no attempt is made to reduce business to a cash system. In general, there is no regular rendering of bills or requirement of settlements; but the physician's patrons are encouraged to use his skill, and such medical and surgical supplies as he chooses to furnish, with a very indefinite understanding as to compensation in the dim and distant future. The average practitioner acquires the habit of assuming it to be a necessary part of his professional dignity not to show any anxiety for prompt and full compensation for his services.

It is a pitiable spectacle to see men who have grown gray in practice giving their services gratuitously, charging half of regular rates, letting their bills run indefinitely, in their efforts to resist the competition they have called into existence by their absurd boasting of the profits of their calling, and finally dying, with little or nothing left for the support of those dependent on them.

It is a noticeable fact that the trade in medicine, as carried on by the druggists and patent-medicine venders, is rapidly increasing at the expense of the business interests of the profession. This is chiefly owing to the better business methods employed. Medical charity is assumed entirely by the profession, while the trade is conducted on a strictly cash basis. Much attention has been given, in the past, to the protection of members from the competition of quacks, but they would receive very much more benefit could they be successfully protected from their own bad business habits.

These business disadvantages have a demoralizing effect on the individual members. Instead of that friendly good-will and affection that usually exists among educated men in other callings, the business habits of the general practitioner tend to produce the opposite effect. Young men enter the profession with a generous sense of gentlemanly feeling toward their professional brethren; but in time this is too frequently supplanted by selfish hostility. If a good business system were adopted the professional duties would be made much more congenial and the financial results would be greatly increased.

The cause of these disabilities lies with the members of the profession; and the remedy, so far as remediable, is in their own hands. A local remedy would be of no use; to be effective, it must be general. The power vested in the medical council to establish a code of ethics and insist on its observance on pain of expulsion from the profession, should be utilized for this purpose. By this means the general interests and social tone of the profession might be greatly enhanced.

CORRESPONDENCE.

FINAL EXAMINATIONS.

To the *Editor of THE MEDICAL NEWS*,

SIR: In calling lately on a medical student I found him busied over his books, reviewing and studying, in preparation for the final examinations. All the work of three years of hard study was to be tested by a few questions. The mental strain he was undergoing was severe enough to cause physical depression; and this added only the more to worry him, as he feared he would break down before the examinations were ended.

A final examination seems to me an antiquated educational method which cannot possibly give anyone an idea of the fitness or unfitness of a candidate; besides, it causes such an amount of physical anguish as to be positively cruel. The student who has been a good scholar all the year may not be able to answer readily or under excitement the ten or twenty questions asked at the final examination, while "the idiot" may be so coached and trained on "catch questions" as to pass a creditable examination.

The good students are compelled to stuff their craniums with statistical and theoretic data, which are forgotten directly after examination, yet which are required in order to *pass*.

In one college, at this year's examinations, the students were obliged to learn two conflicting theories, the one for one professor, the other for the other professor, each in contradiction to the other. If by chance they should get "mixed," and at examination give Prof. A. the theory of Prof. B., and *vice versa*, they would score two bad points.

Again, the last lectures, often the most interesting, must often be neglected in order to attend the "coaching quiz" and to *study up*. The primary object, "to acquire knowledge," becomes entirely subservient to that of "getting through." No matter how ambitious, how anxious to learn the student may be, the excitement around him and his own anxiety will force him also to strive "to pass," and oblige him to use all his efforts in that direction.

What is the remedy? *Abolish final examinations.* Let the test be the standing of the student during the year or term, obtained by a system of credits given at weekly quizzes or examinations. Let the reward be for original work, the best clinical diagnoses, the examinations on the cadaver, the reports of cases, etc. In other words, let the work that the student does at college be credited to him, and then, if his standing be good, let him have a diploma, and, if he deserves it, at the end of one year or not until ten years; real merit will then receive its due. At the German universities the student takes his examinations singly whenever he feels able and after he has attended a stated period, but in this, too, resides the evil of studying to *pass*.

"A diploma is often only a permission to become ignorant again," remarks the philosopher Guyon, "and this healthy ignorance is often the deeper in proportion as the individual has undergone more mental strain in mastering his knowledge by a fixed date, because of the exhaustion consequent upon it."

Medical colleges must see the evil of this if they but

look for it, and remedies can surely be found; and now, while the examinations are under way or just over, is the time to argue the question.

Very respectfully,
M. V. BALL.

PHILADELPHIA, PA., April 24, 1893.

CRANIECTOMY AND AGE.

To the Editor of THE MEDICAL NEWS,

SIR: The statement made by me, at the meeting of the Neurological Society, that "craniectomy has been done without regard to age, Keen having operated on a patient aged nineteen, Hammond on a patient aged twenty-one, and Weir on a patient aged eighteen" (THE MEDICAL NEWS, April 22, 1893, p. 444), was made from memory of cases recently looked up, and, as Dr. Keen has stated, was not exactly correct. Hammond¹ has reported a case of imbecility, epilepsy, and hemiplegia, operated on at the age of nineteen. The patient died, and the autopsy showed congenital porencephalus. Weir operated on a man, aged twenty-one, at the New York Hospital, February 1, 1892, who had been idiotic and epileptic from birth, and who was microcephalic. The case was not reported, but I was present at the operation. Bartlett² operated on a boy aged sixteen. I regret that my recollection of the age of Dr. Keen's cases was inaccurate.

Very truly,

M. ALLEN STARR.

22 WEST FORTY-EIGHTH STREET, NEW YORK.

FRACTURE OF THE FEMUR DURING DELIVERY.

To the Editor of THE MEDICAL NEWS,

SIR: In THE MEDICAL NEWS of March 25th, p. 323, Dr. L. W. Hubbard reports the "Treatment of a Case of Fracture of the Femur during Delivery." This accident is evidently of rare occurrence.

About twenty-three years ago I met with a case in my own practice, the only one which I have known to occur.

Called into the country a distance of four or five miles, I found a woman in an advanced stage of labor. The cord was prolapsed, and the right foot and left hand were presenting at vulva. The arm was, with but little difficulty, returned. By careful manipulation the head was elevated, and the right foot and leg rapidly descended. The cord was giving me some anxiety, so I encouraged the woman—a fine specimen of a healthy country dame—to use expulsive force during pains. With the extruded limb I employed moderate traction. The left leg still remained above the pelvic brim, while the right, with its natis, was bulging the distensible perineum. In this state of things, during a most powerful expulsive pain, a distinct "thud" was heard in the right iliac region. Another pain dislodged the limb, and the labor was soon completed.

The child was a fine female of nine pounds. The cause of the audible snap was soon discovered: the child's femur had been fractured at about the junction of the middle and upper thirds.

Though I had, at that time, been in active practice

over thirty years, I had never known of such an accident; neither could I recall a special reference to it during my pupilage in the University of Pennsylvania, or by authors which had come into my hands. My position was anything but pleasant. Nonplussed as I was, I realized that something must be done immediately. I improvised and applied a temporary stay, or splint, of harness leather, previously taking a careful measurement of the whole limb and making a draft or model of the limb from the hip down. A skilful mechanic succeeded very well in carving out a splint from firm, light wood, snugly fitting and completely inclosing the outer half of the limb. This being padded, was adjusted to the limb the next day, and retained in position by a bandage and adhesive strips. No other appliance was used. In sixteen days complete union had taken place. The dressing was perfectly satisfactory in every particular—light, convenient, and in no wise cumbersome. The child, apparently, had no suffering, was thrifty, and at two years was as active as other children; the injured leg was as good as its fellow in length and shape.

J. P. GRUWELL, M.D.

ALLIANCE, O.

NEWS ITEMS.

The American Association of Obstetricians and Gynecologists will hold its Sixth Annual Meeting at Detroit, Mich., on June 1, 2, and 3, 1893. The following is the preliminary program as far as titles are announced:

The President's Address, "The Present Position of Pelvic Surgery," by Dr. L. S. McMurtry, Louisville; "Abdominal Fixation," by Dr. Florian Krug, New York; "Endoscopic Tubes for Direct Examination of the Interior of the Uterus and Bladder," by Dr. Robert T. Morris, New York; "Placenta Previa," by Dr. William H. Wenning, Cincinnati; "What are the Indications for Abdominal Section in Intra-pelvic Hemorrhage?" by Dr. M. Rosenwasser, Cleveland; "Treatment of Metritis," by Dr. E. Pietranera, Cordova, A. R.; "A Plea for Better Surgery in the Closure of the Abdominal Incision," by Dr. H. W. Longyear, Detroit; "Remarks on the Treatment after Abdominal Section," by Dr. C. C. Frederick, Buffalo; "The Management of the Abdominal Incision," by Dr. Charles A. L. Reed, Cincinnati; "Dilatation of the Cervix for Dysmenorrhea," by Dr. E. S. Pond, Rutland; "Extra-uterine Pregnancy, with Report of Cases," by Dr. George S. Peck, Youngstown; "A Contribution to the Study of Ectopic Gestation," by Dr. E. Arnold Praeger, Nanaimo; "A Few Practical Notes on the Establishment of Anastomosis between the Gall-bladder and Intestine for Obstruction of the Common Duct, with the Relation of a Case of Obstruction of the Common Duct by a Small Growth," by Dr. James F. W. Ross, Toronto; "Vaginal Hysterectomy for Malignant Disease," by Dr. Rufus B. Hall, Cincinnati; "The Care of Pregnant Women," by Dr. John Milton Duff, Pittsburgh; "A Contribution to the Pathology of Surgical Disease of the Gall-bladder," by Dr. Walter P. Manton, Detroit; "The Legal Questions in Gynecological Operations on the Insane," by Dr. Walter P. Manton, Detroit; "Pelvic Abscess," by Dr. I. S. Stone, Washington; "Central Rupture of the Perineum: Its Causation and Prevention," by Dr. John C. Sexton, Rushville; "A

¹ New York Medical Journal, August, 1890.

² Hahnemannian Monthly, May, 1890.

Case of Myomectomy with Extra-peritoneal Treatment of the Pedicle, followed by Pregnancy and Complicated by Hemorrhages through the Abdominal Cicatrix," by Dr. X. O. Werder, Pittsburg; "Anatomy and Surgical Importance of the Peri-renal Cellulo-adipose Tissue," by Dr. L. H. Dunning, Indianapolis; "Report of Cases from Practice, with Remarks on the Same," by Dr. A. Vander Veer, Albany; "Further Observation on the Relation of Pelvic Disease and Psychical Disturbances in Women," by Dr. George H. Rohé, Catonsville.

The Associated Physicians and Surgeons is the name of a corporation that has been organized in New York for the purpose of performing the clerical, financial, and legal work necessary to the proper conduct and protection of the business affairs of medical practitioners exclusively. The work may be done either in the name of the subscriber or that of the Association, as may be desired.

An advisory board of physicians moulds the policy of the corporation to meet the needs and requirements of the profession, while that policy is executed in detail by business men especially fitted for the work to be done.

A subscriber may have placed at his disposal expert bookkeepers and stenographers, who call at his office sufficiently often to at all times keep his work in proper condition.

Accounts will be presented as requested, either by mail or by personal collector.

Prompt and intelligent service will be rendered on all doubtful accounts.

Claims against estates will be timely and properly presented and collected.

The corporation will have associate attorneys in every city to facilitate the collection of accounts in other States and foreign countries.

Special reports regarding the financial standing of patients will be rendered.

Loans will be negotiated.

Leading counsel that make a specialty of medical jurisprudence will be retained by the Association to furnish legal advice.

A Philadelphia office has been opened in the Mutual Life Building at Tenth and Chestnut Streets.

For Good Roads.—Congress has directed the Senate Committee on Agriculture and Forestry to investigate the condition of the agricultural interests of the country, and, if found depressed, to ascertain the causes and inquire into the proper remedy. This committee has appointed sub-committees to assist in the work, one of which has charge of the investigation of the condition of cotton-cultivation, another sub-committee will investigate matters relative to the production of wheat.

The condition of the roads throughout the country has a direct influence on the cost of production and upon the profit to the farmer of every article which he raises and sells, and, therefore, the most important subject for the committee to investigate is the relation of roads to the agricultural interests of the country.

A petition has been submitted to the Senate asking for the appointment of a sub-committee to make this investigation.

The Senate Agricultural Committee of the Fifty-third

Congress is composed of the following members: Hon. James Z. George, Chairman, Carrollton, Miss.; Hon. William B. Bate, Nashville, Tenn.; Hon. Matt. W. Ransom, Weldon, N. C.; Hon. Wm. Alfred Peffer, Topeka, Kan.; Hon. William N. Roach, North Dakota; Hon. James McMillan, Detroit, Mich.; Hon. William D. Washburn, Minneapolis, Minn.; Hon. Redfield Proctor, Proctor, Vt.; and Hon. Henry C. Hansborough, Devil's Lake, North Dakota, to whom those interested in the subject may write.

The Third Annual Conference of State Medical Examining and Licensing Boards will be held in Milwaukee, Wis., June 7, 1893. The following subjects will be discussed:

1. The Evolution of State Medical Examining and Licensing Boards. Their present and prospective influence in elevating the moral and intellectual tone of the profession.

2. Composition of Boards. *a.* The desirable number of members. *b.* The desirable appointing power. *c.* The advantages and disadvantages of separate boards representing the different schools of practice.

3. Provisions of the various State Laws. *a.* Should the possession of a diploma from a recognized medical school be a prerequisite to appearing before a board for examination? *b.* What reciprocal relations should exist between boards? *c.* Should teachers in medical schools be eligible to membership on State examining boards? *d.* Defects in existing laws; the best law in vogue; the ideal law.

4. Methods of Conducting Examinations. *a.* How should the examination be prepared? *b.* The scope of examinations. *c.* The minimum and maximum requirements.

Dr. John H. Rauch is the President; Dr. W. W. Potter the Vice-President; Hugh M. Taylor, Secretary and Treasurer.

The French Congress of Surgery will be held in the middle of October, 1894. Prof. Tillaux has been elected President and M. Alphonse Guérin, Vice-President. The questions proposed for discussion are: 1. The Etiology and Pathogenesis of Carcinoma; 2. The Surgery of the Spine.

Lady Lister, the wife of Sir Joseph Lister, has just died of acute pneumonia while travelling in Italy. She was the daughter of the late distinguished surgeon of Edinburgh, Mr. Syme.

Surgeon-General of the United States Navy.—The Secretary of the Navy has appointed Medical Inspector J. Rufus Tryon to be Surgeon-General of the Navy, to succeed John Mills Brown, retired.

The Colorado State Medical Society will hold its Twenty-third Annual Meeting at Denver, June 20, 21, and 22, 1893. An interesting program is in process of completion.

The First International Samaritan Congress will be held at Vienna, from September 8 to 10, 1893, under the presidency of Professor Billroth.

Wernicke, of Breslau, has been called to Vienna, to assume charge of the Second Psychiatric Clinic.